NASA-TP-2570 19860018629

NASA
Technical
Paper
2570

April 1986

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Royce D. Moore,
Donald R. Boldman,
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Lewis Research Center
Cleveland, Ohio

NASA
National Aeronautics
and Space Administration

**Scientific and Technical
Information Branch**

Summary

Two turning vane designs were experimentally evaluated for corner 1 (downstream of the test section) of a 0.1-scale model of the NASA Lewis Research Center's proposed Altitude Wind Tunnel (AWT). Vane A was a controlled-diffusion airfoil shape; vane B was a circular-arc airfoil shape. The vane designs were tested over corner inlet Mach numbers from 0.16 to 0.465. Several modifications in vane setting angle and vane spacing were also evaluated for vane A. The overall performance obtained from total pressure rakes indicated that vane B had a slightly lower loss coefficient than vane A. At Mach 0.35 (the design Mach number without the engine exhaust removal scoop), the loss coefficients were 0.150 and 0.178 for vanes B and A, respectively.

Resetting the vane A angle by $-5°$ (vane A10) to turn the flow toward the outside corner reduced the loss coefficient to 0.119. The improvement was attributed to the reduction in the endwall losses (i.e., the interaction of the vane ends with the corner walls) especially in the outside corner region. Examination of the data indicated that the losses in the center portion of the corner (two-dimensional losses) were essentially the same for vanes A and A10 but higher for vane B. The best configuration (vane A10) was also tested with a simulated engine exhaust removal scoop. The loss coefficient for that configuration was 0.164 at Mach 0.41 (the approximate design Mach number with the scoop).

Introduction

It has been proposed that the inactive Altitude Wind Tunnel (AWT) at the NASA Lewis Research Center be rehabilitated to meet the aeropropulsion needs of the future. The program would extend the capabilities of the tunnel to permit testing at Mach numbers to 0.92. The tunnel would accommodate tests involving fuel-burning engines, adverse weather conditions, and acoustics. The original AWT became operational in 1944 and was used for aeropropulsion research until 1958. The tunnel internal components were then removed, and it was converted to altitude test chambers for space research in the late 1950's and early 1960's. Therefore the proposed AWT would require all new internal components. In addition to a new test section and heat exchanger, four new sets of turning vanes and a new two-stage fan drive system would be required (fig. 1). The highest Mach number corner (corner 1, downstream of the test section) would have an engine exhaust removal scoop extending through the center of the turning vanes. The fan drive shaft fairing would extend through the corner 2 turning vanes. The proposed tunnel features and the new tunnel components are described in detail in references 1 to 3.

Because of the magnitude of the proposed rehabilitation of the AWT a modeling program was undertaken to ensure the technical soundness of the new component designs. A 0.1 scale was chosen as the common size for the various components, in part because it represented the upper limit of the Lewis exhauster flow capabilities. After the individual components are tested, they can be assembled as a complete loop to evaluate the interactions of the various components.

This report presents the test results for two turning vane designs proposed for corner 1. Vane A was a controlled-diffusion airfoil design; vane B was a circular-arc airfoil design. For vane A several modifications in vane setting angle and vane spacing were also evaluated. Data were obtained over a range of corner inlet Mach numbers from 0.16 to 0.465, corresponding to test section Mach numbers of approximately 0.3 to 0.92, respectively. However, for the initial evaluation of the turning vanes in corner 1 the engine exhaust removal scoop was not installed. The data for vane B and all modifications to vane A were evaluated and only the best configuration (vane A10) was chosen to be tested with a simulated scoop. In this report all of the total pressure data upstream and downstream of the vanes were obtained from rakes. Axial wall static pressure and vane surface pressure data were also obtained. The pressure data are presented in tabular form for all of the configurations evaluated. Additional data and results from some analyses are presented for vanes A, A10, and B in corner 1 without the scoop in reference 4.

Apparatus and Procedure

Test Apparatus

Without scoop.—The vane sets were tested without the simulated exhaust removal scoop in the configuration shown in figures 2 and 3. Room air entered the bellmouth and passed through a honeycomb flow straightener and two 1-diameter-long spool pieces before reaching the corner inlet measurement plane. The air was then turned by the corner vanes whereupon it flowed through the downstream instrumentation ring (corner

exit plane) and three 1-diameter-long spool pieces before exhausting through a choked-plate assembly to the NASA Lewis central altitude exhauster system.

A choked-plate assembly was used for flow control. It included a series of six removable plates plus one fixed plate to provide seven specific flow rates between 35.38 and 81.65 kg/sec. The flow straightener was an aluminum honeycomb with a hexagonal cell pattern. The distance across the flats was 0.95 cm and the length was 7.08 cm. The upstream and downstream diameters of the corners were 82.296 cm.

The vanes were all made the same height and mounted in a rectangular holder (fig. 4). A foam rubber filler material was used between the vanes to form the elliptical internal flow path. With the foam between the vanes the vane setting angles could be manually changed without disassembling the corner. The vane spacing could also be varied. Both the setting angles and the spacings were individually set for each vane.

With scoop. – Although the same basic components were used for the tests with the simulated exhaust removal scoop, they were rearranged as shown in figure 5. The instrumentation rings were moved 1 diameter upstream and downstream of the corner because of interference with the scoop and wing section. A vane survey instrumentation plate was also installed (for later use) just downstream of the vane holder. This plate served as a spacer and moved all downstream instrumentation further away from the vanes. The scoop assembly installed in corner 1 is shown in figure 6.

The simulated scoop (fig. 7) was made of wood in two parts. Material was removed in the region of the vanes. The wing section was mounted in the downstream corner section, and the upstream scoop was inserted from in front of the vanes. The geometry for the scoop is given in figure 8. As shown in figure 1, the active exhaust scoop would extend upstream of the vanes almost to the test section exit. For the simulation only the part in the corner was scaled. The nose contour was arbitrarily chosen. For all tests with the scoop the foam rubber in the outer flow path between the vanes was replaced by hard-plastic filler pieces cut to match the elliptical contour. Only the A10 vane configuration was tested with the simulated scoop and the hard-plastic filler pieces.

Turning Vanes

Two different sets of turning vanes were designed for corner 1. Each set was mounted in the vane holder (fig. 4). There was a flat length of 10.67 cm in the turn for mounting the vanes (fig. 3). The flat section formed an angle of 45° with both the inlet and exit corner spool pieces. The major axis of the elliptical corner was 116.38 cm and the minor axis was 82.296 cm.

Vane A. – Vane A (fig. 9), a controlled-diffusion airfoil, was designed by an inverse method developed by Sanz (ref. 5). The inverse design code has an advantage that the surface velocity distribution can be directly input. This allows control of the velocity diffusion to eliminate boundary layer separation. The calculation method accounts for the boundary layer displacement thickness and adjusts the blade shape to provide the vane manufacturing coordinates as output. A schematic showing the vanes equally spaced along the major axis is shown in figure 10. The 20 equally spaced vanes had a solidity of 1.89. The design inlet Mach number was 0.352 and the vane chord was 10.67 cm. The leading edges of the first vane and the last vane were 4.454 cm from the outer walls. Dashed lines in figure 10 show where the next vanes would have been located with respect to the walls. The orientation of the vane setting angle and the vane spacing are also shown in the small illustration in the figure. The manufacturing coordinates for the vane are given in table 1.

During the testing of vane A several changes were made to the vane setting angle and to the vane spacing (table 2). The outside corner contour was also modified as shown in figure 11 for one test (vane A11). The original outside corner contour was straight from inlet to exit, forming the elliptical contour. A schematic showing the vane A10 setup in corner 1 with the scoop is presented in figure 12.

Vane B. – Vane B (fig. 13), a circular-arc airfoil, was designed by McFarland by the method described in reference 6. This method solves for a velocity distribution by using a blade-to-blade panel method code. These vanes were designed with a solidity of 2.290, resulting in 24 vanes. The design inlet Mach number was 0.35 and the vane chord was 10.67 cm. A schematic showing vane B along the major axis is presented in figure 14. The figure also shows by dashed line where the next inside and outside vanes would have been positioned. The leading edge of the first vane was 4.859 cm from the outer corner; the leading edge of the last vane was 4.422 cm from the inner corner. Vane B was tested only at its design conditions. The vane manufacturing coordinates of vane B are given in table 3.

Instrumentation

The airflow was determined from measurements on a choked plate located downstream of the vanes (fig. 3). Six removable plates and a fixed plate were used to set seven specific flows. The choked-plate assembly was an arrangement of the seven plates that tended to form a converging nozzle. To increase the flow, the last plate was removed and the preceding plates kept in place.

To determine the overall performance of the corner with the vane row, diametrical rakes (fig. 15) were used at the upstream and downstream instrumentation ring stations. These rakes could be moved to four positions around the circumference (0°, 315°, 270°, and 255° – clockwise looking downstream). The rakes contained 16 elements for total pressure measurement and six elements for total temperature measurement (fig. 15). Boundary layer rakes (fig. 16) were also installed at the upstream and downstream stations. Outer wall static pressure taps were located at approximately the same axial planes as the rakes.

Other wall static pressure taps were installed in the spool pieces and in the corner. The axial and circumferential

locations of the taps for the corner without and with the scoop are given in figures 17 and 18, respectively. The locations of the scoop static pressure taps are given in figure 19. Vane performance was evaluated from measurements of surface static pressures obtained from taps on adjacent vanes at four sections (fig. 20). Three of the sections were along the major axis; the fourth was near the top of the middle vanes. With the scoop in place the vane surface static pressure taps at section C were covered and therefore not recorded.

All of the rake total pressure measurements and the static pressure measurements were recorded on individual transducers calibrated just before each reading. The temperatures were determined from Chromel-constantan thermocouples by using a floating-point temperature reference.

To visually indicate the flow conditions, tufts were taped to the walls around the circumference. Tufts were also taped to the scoop.

Test Procedure

For a given vane configuration a particular choked plate was installed to set the desired airflow. The diametrical rake upstream was positioned in the instrument ring at either 0° or 225° (clockwise looking downstream). The inlet boundary layer rakes were positioned 90° from the large rake. The downstream rake was positioned at either 225° or 0° (opposite the upstream rake position). The outlet boundary layer rakes were also positioned 90° from the large downstream rake. Data were recorded at the particular rake position. The facility was then shut down and all rakes were manually indexed 45°. The flow point was reestablished and data were then recorded at the next position. This procedure was repeated until data were recorded at the four rake positions. The upstream and downstream rakes were rotated in opposite directions to minimize the effect of the upstream rake wake on the downstream pressure measurement. All of the static pressure measurements were recorded at each rake position.

Calculation Procedure

The static pressure measurements recorded at the four rake positions were arithmetically averaged and corrected to standard-day conditions at the corner inlet plane to obtain the values presented in this report.

The total pressure measurements from the rakes were arranged to form arrays of total pressures at given circumferential locations and given percentages of span (from the outer wall). The data from the boundary layer rakes were arranged in a similar manner. The values from the upstream and downstream diametrical rakes were each area averaged to obtain the corner overall values.

The airflow was calculated from Fliegner's formula (ref. 7) for a choked flow by using measured values of nozzle total pressure and total temperature. This calculated airflow agreed within 2 percent of the mass-averaged airflow calculated from limited cases in which very detailed flow surveys were made. The inlet velocity head and the average inlet and exit Mach numbers were based on the calculated airflow. Total pressure, static pressure, total temperature, velocity head, and airflow were all corrected to standard-day conditions based on the corner 1 inlet condition (station 11).

The symbols and equations used in the calculations are presented in appendixes A and B, respectively.

Results and Discussion

The results are presented in three main sections: overall total pressure losses, wall static pressure distributions, and vane surface Mach number distributions. The data for all of the vane A configurations are presented in the tables. However, for comparison, data plots are presented for the design cases for vanes A and B and for the best configuration (vane A10). The effect of the scoop on the performance of vane A10 is also presented.

The overall performance for corner 1, based on the rake measurements, is summarized in table 4 for the various vane configurations. The total pressure measurements for each data point are presented in tables 5 to 28. The vane inlet and exit circumferential distributions of static pressure are presented in tables 29 to 52. The wall axial static pressure measurements are presented in tables 53 to 76. The scoop static pressures with vane A10 in corner 1 are presented in tables 77 to 83. The vane surface static measurements are presented tables 84 to 107.

Overall Performance

The overall performances of vanes A, A10, and B are presented in figure 21 for corner 1 without the scoop. The loss coefficient for the corner based on measurements at stations 11 and 34 (see fig. 17 for locations) is shown as a function of the corner inlet Mach number. Over the range of Mach numbers investigated, vane A had a slightly higher overall loss than did vane B when the vanes were at their design setting angles. At the design inlet Mach number of 0.35 the loss coefficients were about 0.150 for vane B and 0.178 for vane A.

As discussed earlier, several changes in the vane setting angle and vane spacing were investigated with vane A. These changes were made because the results of the data and visual observations of tufts indicated severe flow separation in the outside region of the corner. The changes are listed in table 2 and the results of the overall performance are given in table 4. It is interesting to note that local changes in vane angle or vane spacing had relatively little effect on the overall performance. The overall performance did not change significantly until all of the vanes were reset by −5° (turning the exit flow toward the outside of the corner, vane A10). For the design inlet Mach number of 0.35 the corner loss coefficient decreased to 0.119. When the outside wall contour was modified with the reset vanes (vane A11), the loss

coefficient increased slightly over that of the unmodified corner but was still significantly less than that of the original vane (vane A). The vane B configuration was tested only at its design condition because the visual observations of the tufts and the results of the data did not indicate flow separation in the outside region of the corner.

Since the vane A10 configuration produced the lowest losses, it was chosen to be tested with the simulated scoop. The overall performance for vane A10 with the scoop is presented in figure 22. The figure also shows data for vane A10 without the scoop. With the scoop the design inlet Mach number increased to about 0.41 for the same airflow because of the decreased area in the corner. As expected the loss coefficient increased with the scoop configuration because the scoop, being located in the lowest loss region, forced more of the flow toward the higher loss region in the endwalls. The scoop also provided a surface for boundary layer growth. The loss coefficient for vane A10 with the scoop was 0.164 at Mach 0.41; the corresponding values without the scoop were 0.118 and 0.35, respectively. The airflow was approximately 72.5 kg/sec for both configurations (table 4).

The radial distributions of inlet total pressure are presented in figure 23 for vanes A, A10, and B without the scoop at the design inlet Mach number of 0.35. Although the data are presented at a circumferential location of 0° only, these radial distributions are typical of all circumferential locations. For all of the flows and configurations investigated, the inlet pressure profiles were essentially constant from 10 percent of span to the centerline. The loss in inlet total pressure in the outer wall region decreased at the lower flows (tables 5 to 28).

The rake data as well as observation of the tufts and the static pressure measurements indicate that the flow in the outside corner region was separated for vane A. To illustrate, the total pressure distribution along the major axis is presented in figure 24. The 90° location (inside corner) is shown in part (a) and the 270° location (outside corner), in part (b). For vane A the loss in total pressure at the outside corner was greater than at the inside corner. A comparison with vane A10 showed that resetting the vanes decreased the losses at the outside corner in the region from the outer wall to approximately 20 percent of span (fig. 24(b)). The losses for the reset vanes at the inside corner were slightly higher (fig. 24(a)). The losses in the central portion of the corner were approximately the same for vanes A and A10. This was also confirmed by the vane wake survey results of reference 4.

Computer-plotted contours of the exit total pressure field for the various vane configurations are presented in figures 25 and 26 for the nominal design airflow of 72.5 kg/sec. The pressure contours for vanes A, B, and A10 without the scoop (fig. 25) show that the losses were highest for vane A at the outside corner and highest for vane B on the inside corner. Vane A10 had the most uniform distribution of the three sets. The trailing edge of vane A was offset from the leading edge by approximately 2.7 cm (table 1). Thus in the outside region of the elliptically contoured corner vane holder the vane leading-edge height was less than the vane trailing-edge height. In the inside region the opposite was true, with the leading-edge height being the greater. Therefore in the outside region of the corner the flow was effectively diffused through the vanes, and in the inside region the flow was accelerated. The interaction of the flow with the adverse geometry at the outside corner contributed to the higher losses there for vane A. Resetting the vanes by −5° (vane A10) probably unloaded them enough so that the interaction of the flow with the corner vane geometry did not cause separation. (Vane loadings are given in the section Vane Surface Distributions.) For vane B tufts located at approximately the 90° circumferential location and midway in the vane holder indicated flow separation. This separated flow probably resulted in the higher losses at the inside corner for vane B.

The effect of the scoop on the exit pressure contours for vane A10 is shown in figure 26. The plot for vane A10 without the scoop is repeated from figure 25. The effect of the scoop is evident by the lower pressures along the horizontal centerline.

Static Pressure Distribution

The axial static pressure distribution at the 90° position (inside corner) is presented in figure 27 for vanes A, A10, and B without the scoop for an airflow of approximately 72.5 kg/sec. For the 90° position the influence of the corner extended about 20 cm upstream and downstream. The static pressure for vane A suggests that the flow was being slowed in the inside corner probably as a result of excessive blockage between the inside corner and the twentieth (last) vane. Resetting the vane (vane A10) relieved the problem and let more flow through the inside corner as indicated by the lower static pressure. This point is further evidenced by the static pressure distribution through the corner at the 270° position (outside corner) in figure 28. The static pressure for vane A continued to decrease, suggesting a shift in the flow toward the outside of the corner. In contrast the static pressure for vanes A10 and B increased. In the corner downstream of the vanes the results for vanes A10 and B indicate the consistent trend of decreasing static pressure with distance. The downstream static pressure distribution for vane A showed the opposite trend. The low value of static pressure near the vane suggests that the flow has accelerated appreciably. Looking at the first vane and its relationship with the outside corner (fig. 10), one could get the impression that the passage formed a converging-diverging nozzle. For vane A the tufts indicated that the flow in the outside corner was separated.

The effect of the scoop on the wall static pressure at a circumferential location of 270° (outside corner) is shown in

figure 29 for vane A10 for the nominal design airflow of 72.5 kg/sec. The Mach number at the inlet of the corner was greater with the scoop, as suggested by the lower static pressure. As the air approached the vanes, the static pressure increased rapidly, indicating a decreased flow in the outside region as a result of the blockage from the scoop.

The circumferential distribution of wall static pressure coefficient 5.34 cm upstream and downstream of the vane row without the scoop is presented in figure 30 for vanes A, A10, and B. The wall static pressures in the outside region of the corner with vane A (fig. 30(a)) were significantly different across the vane row. This is an indication that the separation was not confined to the 270° location. The flow tufts showed that separation occurred from at least 225° to 315° (tuft locations). As discussed earlier, the vanes formed an adverse geometry with the walls in the outer half of the corner, with the geometry becoming more acute near the outside corner. This contributed to the flow separation. For vanes A10 and B (figs. 30(b) and (c)) the circumferential distributions upstream and downstream were quite similar. For these two configurations the tufts showed no separation.

The effect of the scoop on the circumferential distribution of wall static pressure coefficient just upstream and downstream of the vane row is presented in figure 31 for vane A10. The scoop affected the entire flow field upstream of the vanes, with the flow apparently shifting from the outer to the inner half of the corner.

From these static pressure distributions and the total pressure measurements presented earlier, the difference in overall performance between vanes A and A10 without the scoop appears to be predominately the result of the total pressure loss caused by the interaction of the walls with the vanes (three-dimensional effects). Resetting the vanes had little effect on the overall losses through the center portion (two-dimensional losses) of the corner. This is illustrated in reference 4, where measured vane wake losses are essentially the same for vanes A and A10. It is also indicated by the data in figure 24, which show the total pressure distribution in the center portion to be essentially the same for both vanes.

The endwall losses in the corner for vane B appear to be of the same order as those for vane A10. This would suggest that the loss in the center portion was higher for vane B than for vane A10. In reference 4 the measured vane wake losses in the center portion of the corner (two-dimensional losses) for vane B were significantly larger than those for vanes A and A10. The data in tables 5, 8, and 18 tend to confirm this conclusion.

For the three rows of static pressure taps the static pressure of the downstream scoop wing section (fig. 32) increased almost linearly to the end of the airfoil. The static pressure values on the bottom portion of the wing section agreed with those at the corresponding location on the upper surface. This indicates that the flow was axisymmetric about the airfoil. The static pressure data as well as visual observation of tufts indicated that the flow was attached to the end of the section.

Vane Surface Distributions

Measured vane surface Mach number distributions for vanes A and B are presented for section C (middle of the vane set) because that section should be representative of the two-dimensional flow characteristic of the design. In general the measured Mach number distributions for vane A (fig. 33) agreed quite well with the design, but the measured spike in Mach number toward the leading edge on the pressure surface was more pronounced than the design. The measured gradients in Mach number on the suction surface were slightly steeper than design, with the front-portion Mach numbers being slightly greater than design and those past midchord being less than design. The Mach number distribution on the pressure surface of vane B agreed reasonably well with the design distribution (fig. 34). However, the Mach numbers on the suction surface near both the leading and trailing edges were less than design. The flow near the trailing edge of the suction surface had probably separated, causing the more abrupt decrease in Mach number.

The Mach number distributions for each of four locations are presented in figures 35 to 37 for vanes A, A10, and B, respectively. For vane A the Mach number distributions are essentially the same for sections B and C (fig. 35). This would suggest that the endwall (three-dimensional) effects were confined to less than 20 percent of span. For section A (near the outside corner) the exit surface Mach number was approximately 0.46, indicating that more diffusing would be required to obtain the exit vane Mach number of 0.35. The reverse would be required for section D (near the inside corner), where the surface exit Mach number was less than 0.35. For vane A10 the surface Mach number distributions reflect the incidence angle change near the leading edge of each section (fig. 36). The surface exit Mach numbers were more uniform and closer to the exit corner Mach number of 0.35 (table 4). Resetting the vane angle reduced the exit Mach number for section A from about 0.47 to 0.36. For vane B the surface Mach number distributions were the same for sections B and C (fig. 37). Section A distributions were very similar to those of sections B and C. As with vane A10 the surface exit Mach numbers were fairly uniform for the four sections.

The effect of the scoop on the vane surface Mach number distributions for vane A10 is presented in figure 38. Sections A, B, and D are compared for the nominal airflow of 72.5 kg/sec. Since the scoop reduced the area, velocities would be expected to increase for all three sections with the scoop. For section A the surface Mach numbers were lower with the scoop; for both sections B and D the surface Mach numbers were higher with the scoop. Thus the flow had shifted away from the outside corner.

Summary of Results

Two turning vane designs were experimentally evaluated for corner 1 (downstream of the test section) of a 0.1-scale model of the NASA Lewis Research Center's proposed Altitude Wind Tunnel (AWT). Vane A was a controlled-diffusion airfoil shape; vane B was a circular-arc airfoil shape.

The turning vanes were tested over a range of corner inlet Mach numbers from 0.16 to 0.465. In addition, several modifications of vane setting angle and vane spacing were evaluated for vane A. The best vane A configuration (vane A10) was also tested with a simulated engine exhaust removal scoop. This investigation yielded the following principal results:

1. At the design corner inlet Mach number of 0.35 the corner loss coefficient with vane B (0.150) was lower than that with vane A (0.178). Resetting vane A to turn the flow 5° toward the outside corner (vane A10) reduced the corner loss coefficient to 0.119.

2. The decrease in corner losses between vanes A and A10 was attributed to the reduction in endwall losses when the vanes were reset by −5°. The losses in the center portion of the corner were essentially the same with the angle change.

3. Although the corner losses were lower for vane B than for vane A, the losses through the center of the corner were higher for vane B. This suggests that for vane B the two-dimensional vane losses were greater and the endwall interactions (three-dimensional effects) were lower than for vane A.

4. The corner loss coefficient with vane A10 increased to 0.164 when it was tested with a simulated engine exhaust removal scoop. The corner inlet Mach number at design flow increased to about 0.41 with the scoop.

Lewis Research Center
National Aeronautics and Space Administration
Cleveland, Ohio, December 9, 1985

Appendix A
Symbols

A	area, cm^2
A_{ex}	area at corner 1 exit, cm^2
ΔA_{ex}	incremental area for rake element at exit, cm^2
A_{in}	area at corner 1 inlet, cm^2
ΔA_{in}	incremental area for rake elements at inlet, cm^2
A_s	cross-sectional area of scoop at corner 1 inlet, cm^2
C	vane chord, cm
D	diameter, cm
d_n	nozzle plate diameter, cm
M	Mach number
M_{ex}	Mach number at corner 1 exit
M_{in}	Mach number at corner 1 inlet
M_v	Mach number on vane surface based on inlet total pressure and vane surface static pressure
N	station
P_n	standard-day-corrected nozzle total pressure, N/cm^2
$P_{s,in}$	standard-day-corrected static pressure at corner 1, N/cm^2
$P_{s,v}$	standard-day-corrected vane surface static pressure at V location, N/cm^2
$P_{s,x}$	standard-day-corrected wall static pressure at X location, N/cm^2
$P_{t,e}$	individual rake element standard-day-corrected exit total pressure, N/cm^2
$P_{t,ex}$	area-averaged, standard-day-corrected exit total pressure, N/cm^2
$P_{t,i}$	individual rake element standard-day-corrected inlet total pressure, N/cm^2
$P_{t,in}$	area-averaged, standard-day-corrected inlet total pressure, N/cm^2
q_{in}	standard-day-corrected velocity head, N/cm^2
R	gas constant
r	radius, cm
T_n	standard-day-corrected nozzle total temperature, K
T_t	standard-day-corrected total temperature, K
V	distance from corner 1, cm
W	airflow, kg/sec
X	axial distance from corner 1 inlet, cm
XC/C	fraction of vane chord in chordwise direction
Y	axial distance from corner 1 exit, cm
Z	height from centerline, cm
γ	ratio of specific heats, 1.40
θ	circumferential location from top dead center (clockwise looking downstream), deg

Appendix B
Equations

Airflow

$$W=0.04044\frac{P_n}{T_n}\left(\frac{\pi}{4}d_n^2\right) \quad \text{(B1)}$$

Overall Inlet Total Pressure

$$P_{t,\text{in}}=\frac{\sum_{i=1}^{64}\Delta A_{in}P_{t,i}}{A_{\text{in}}} \quad \text{(B2)}$$

Overall Exit Total Pressure

$$P_{t,\text{ex}}=\frac{\sum_{i=1}^{64}\Delta A_{\text{ex}}P_{t,e}}{A_{\text{ex}}} \quad \text{(B3)}$$

Loss Coefficient

$$\frac{P_{t,\text{in}}-P_{t,\text{ex}}}{q_{\text{in}}} \quad \text{(B4)}$$

Wall Static Pressure Coefficient

$$\frac{P_{t,\text{in}}-P_{s,x}}{q_{\text{in}}} \quad \text{(B5)}$$

Vane Surface Static Pressure Coefficient

$$\frac{P_{s,v}-P_{s,\text{in}}}{q_{\text{in}}} \quad \text{(B6)}$$

Mach Number

$$\frac{M}{\left(1+0.2\,M^2\right)^3}=\frac{W}{\left(A-A_s\right)P_t}\sqrt{\frac{RT_t}{\gamma}} \quad \text{(B7)}$$

Velocity Head

$$q_{\text{in}}=0.7P_{s,\text{in}}(M_{\text{in}})^2 \quad \text{(B8)}$$

Average Inlet Static Pressure

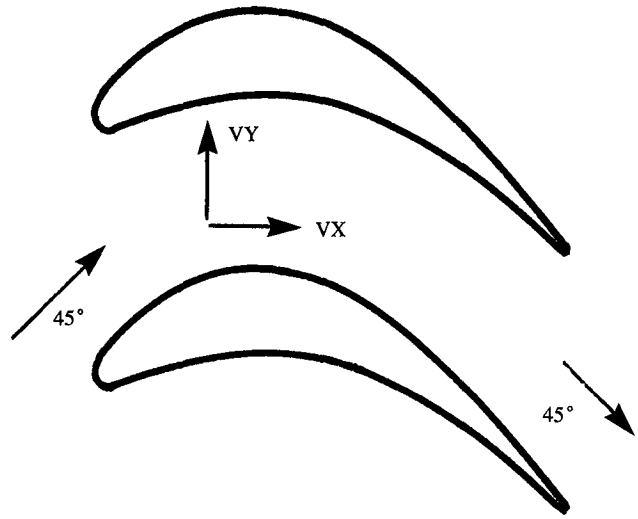
$$P_{s,\text{in}}=P_{t,\text{in}}\left(1+\frac{M_{\text{in}}^2}{5}\right)^{-3.5} \quad \text{(B9)}$$

References

1. Chamberlin, R.: The Altitude Wind Tunnel (AWT)—A Unique Facility for Propulsion System and Adverse Weather Testing. AIAA Paper 85-0314, Jan. 1985.
2. Blaha, B., and Shaw, R.J.: The NASA Altitude Wind Tunnel: Its Role in Advanced Icing Research and Development. AIAA Paper 85-0090, Jan. 1985.
3. Abbott, J.M.; Diedrich, J.H.; Groeneweg, J.F.; Povinelli, L.A.; Reid, L.; Reinmann, J.J.; and Szuch, J.R.: Analytical and Physical Modeling Program for the NASA Lewis Research Center's Altitude Wind Tunnel (AWT). AIAA Paper 85-0379, Jan. 1985.
4. Gelder, T.F.; Moore, R.D.; Sanz, J.M.; and McFarland, E.R.: Wind Tunnel Turning Vanes of Modern Design. AIAA Paper 86-0044, Jan. 1986. (Also NASA TM-87146, 1986.)
5. Sanz, J.M.: Improved Design of Subcritical and Supercritical Cascades Using Complex Characteristics and Boundary Layer Correction. (NASA Contract NAS3-22531.) NASA CR-168166, 1983.
6. McFarland, E.R.: A Rapid Blade-to-Blade Solution for Use in Turbomachinery Design. J. Eng. Gas Turbines Power, vol. 106, no. 2, Apr. 1984, pp. 376-382.
7. Shapiro, A.H.: The Dynamics and Thermodynamics of Compressible Fluid Flow. Vol. I. Ronald Press Co., 1953, p. 85.

TABLE 1.—MANUFACTURING COORDINATES FOR VANE A

[Coordinates are in centimeters.]



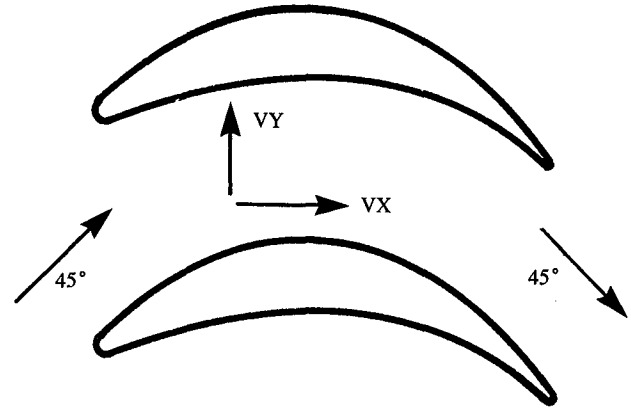
N	VX	VY	N	VX	VY	N	VX	VY
1	9.2673	-5.2090	45	0.6536	-2.1431	89	3.4788	-0.0581
2	9.2673	-5.2090	46	0.4422	-2.2105	90	3.6201	-0.0932
3	9.2447	-5.1856	47	0.2422	-2.2778	91	3.7608	-0.1338
4	9.2013	-5.1406	48	0.0549	-2.3446	92	3.9005	-0.1801
5	9.1402	-5.0770	49	-0.1176	-2.4100	93	4.0398	-0.2321
6	9.0640	-4.9976	50	-0.2771	-2.4640	94	4.1791	-0.2895
7	8.9748	-4.9048	51	-0.4200	-2.5086	95	4.3179	-0.3519
8	8.8741	-4.8006	52	-0.5441	-2.5405	96	4.4564	-0.4194
9	8.7632	-4.6869	53	-0.6461	-2.5534	97	4.5944	-0.4919
10	8.6427	-4.5652	54	-0.7288	-2.5406	98	4.7321	-0.5693
11	8.5134	-4.4368	55	-0.7907	-2.4957	99	4.8695	-0.6516
12	8.3758	-4.3031	56	-0.8301	-2.4326	100	5.0067	-0.7386
13	8.2300	-4.1652	57	-0.8503	-2.3347	101	5.1437	-0.8304
14	8.0762	-4.0240	58	-0.8478	-2.2159	102	5.2806	-0.9269
15	7.9145	-3.8807	59	-0.8180	-2.0790	103	5.4176	-1.0283
16	7.7450	-3.7361	60	-0.7601	-1.9277	104	5.5550	-1.1345
17	7.5677	-3.5912	61	-0.6749	-1.7662	105	5.6930	-1.2456
18	7.3828	-3.4469	62	-0.5658	-1.5992	106	5.8318	-1.3619
19	7.1902	-3.3041	63	-0.4374	-1.4317	107	5.9719	-1.4836
20	6.9900	-3.1634	64	-0.3004	-1.2698	108	6.1136	-1.6108
21	6.7824	-3.0258	65	-0.1489	-1.1149	109	6.2574	-1.7439
22	6.5674	-2.8919	66	0.0081	-0.9708	110	6.4039	-1.8835
23	6.3453	-2.7626	67	0.1681	-0.8383	111	6.5537	-2.0299
24	6.1161	-2.6384	68	0.3291	-0.7176	112	6.7074	-2.1837
25	5.8800	-2.5201	69	0.4897	-0.6084	113	6.8660	-2.3457
26	5.6373	-2.4085	70	0.6493	-0.5101	114	7.0301	-2.5164
27	5.3883	-2.3045	71	0.8074	-0.4221	115	7.2005	-2.6964
28	5.1342	-2.2087	72	0.9641	-0.3435	116	7.3780	-2.8863
29	4.8747	-2.1204	73	1.1193	-0.2737	117	7.5630	-3.0861
30	4.6091	-2.0407	74	1.2731	-0.2120	118	7.7554	-3.2953
31	4.338°	-1.9716	75	1.4257	-0.1579	119	7.9546	-3.5127
32	4.0649	-1.9134	76	1.5772	-0.1108	120	8.1586	-3.7356
33	3.7880	-1.8663	77	1.7286	-0.0737	121	8.3643	-3.9597
34	3.5092	-1.8307	78	1.8786	-0.0412	122	8.5667	-4.1793
35	3.2296	-1.8069	79	2.0275	-0.0141	123	8.7597	-4.3872
36	2.9501	-1.7950	80	2.1758	0.0071	124	8.9360	-4.5757
37	2.6721	-1.7949	81	2.3233	0.0224	125	9.0891	-4.7380
38	2.3967	-1.8065	82	2.4702	0.0320	126	9.2135	-4.8688
39	2.1255	-1.8294	83	2.6164	0.0360	127	9.3062	-4.9655
40	1.8597	-1.8629	84	2.7619	0.0343	128	9.3668	-5.0282
41	1.6007	-1.9059	85	2.9066	0.0270	129	9.3965	-5.0588
42	1.3498	-1.9571	86	3.0507	0.0141	130	9.3983	-5.0606
43	1.1079	-2.0149	87	3.1941	-0.0044			
44	0.8757	-2.0774	88	3.3368	-0.0284			

TABLE 2.—CONFIGURATIONS FOR CORNER 1

Configuration	Description
A	Vane A (fig. 10) Setting angle—all vanes at design Vane spacing—all vanes at design
A2	Vane A Setting angle—vanes 1 and 2 reset −5°; vanes 3 to 20 at design Vane spacing—all vanes at design
A3	Vane A Setting angle—vanes 1 and 2 reset −5°; vanes 3 to 20 at design Vane spacing—vane 1 moved 0.183 cm toward outside corner
A4	Vane A Setting angle—vanes 1 and 2 reset −5°; vanes 3 to 20 at design Vane spacing—vane 1 moved 0.386 cm and vane 2 moved 0.145 cm toward outside corner
A7	Vane A Setting angle—vane 1 reset −15°; vane 2 reset −10°; vane 3 reset −5°; vanes 4 to 17 at design; vane 18 reset −5°; vane 19 reset −10° Vane spacing—vane 20 removed
A8	Vane A Setting angle−vane 1 reset −10°; vane 2 reset −5°; vanes 3 to 19 at design Vane spacing—vane 20 removed
A10	Vane A Setting angle—all vanes reset −5° Vane spacing—all vanes at design
A11	Vane A Setting angle—all vanes reset −5° Vane spacing—all vanes at design; modified outside corner contour
B	Vane B Setting angle—all vanes at design Vane spacing—all vanes at design

TABLE 3.—MANUFACTURING COORDINATES FOR VANE B

[Coordinates are in centimeters.]



N	VX	VY	N	VX	VY	N	VX	VY
1	10.6121	-1.0363	28	2.7682	0.5760	55	3.3198	2.2963
2	10.4292	-0.8972	29	2.4788	0.4941	56	3.6493	2.3742
3	10.1729	-0.7152	30	2.1894	0.4018	57	3.9788	2.4332
4	9.9166	-0.5456	31	1.8999	0.2985	58	4.3082	2.4741
5	9.6483	-0.3805	32	1.6105	0.1838	59	4.6377	2.4975
6	9.3800	-0.2276	33	1.3211	0.0572	60	4.9672	2.5040
7	9.1116	-0.0864	34	1.0468	-0.0742	61	5.2967	2.4941
8	8.8225	0.0531	35	0.7724	-0.2173	62	5.6228	2.4680
9	8.5334	0.1801	36	0.5715	-0.3299	63	5.9490	2.4248
10	8.2444	0.2950	37	0.4284	-0.3781	64	6.2752	2.3637
11	7.9553	0.3984	38	0.2778	-0.3668	65	6.6013	2.2839
12	7.6662	0.4909	39	0.1435	-0.2979	66	6.9275	2.1847
13	7.3601	0.5775	40	0.0464	-0.1822	67	7.2537	2.0651
14	7.0541	0.6527	41	0.0019	-0.0379	68	7.5798	1.9243
15	6.7480	0.7166	42	0.0169	0.1123	69	7.9060	1.7615
16	6.4419	0.7695	43	0.0891	0.2449	70	8.1904	1.5999
17	6.1359	0.8115	44	0.2556	0.4359	71	8.4748	1.4184
18	5.8298	0.8427	45	0.5018	0.6929	72	8.7591	1.2154
19	5.5238	0.8633	46	0.7480	0.9226	73	9.0435	0.9891
20	5.2177	0.8735	47	0.9942	1.1284	74	9.2710	0.7878
21	4.9115	0.8735	48	1.2404	1.3137	75	9.4986	0.5638
22	4.6053	0.8632	49	1.4866	1.4817	76	9.7261	0.3125
23	4.2991	0.8424	50	1.7802	1.6613	77	9.9537	0.0295
24	3.9929	0.8110	51	2.0737	1.8201	78	10.1812	-0.2898
25	3.6867	0.7689	52	2.3673	1.9597	79	10.3398	-0.5377
26	3.3806	0.7157	53	2.6608	2.0817	80	10.4983	-0.8148
27	3.0744	0.6515	54	2.9903	2.1991	81	10.6121	-1.0363

TABLE 4.—OVERALL PERFORMANCE FOR CORNER 1 BASED ON RAKE MEASUREMENTS

[Inlet total pressure, 10.132 N/cm^2.]

Configuration	Reading	Airflow, kg/sec	Mach number		Exit total pressure, N/cm^2	Total pressure loss, N/cm^2	Total loss coefficient
			Inlet	Exit			
A	8-11	72.16	0.347	0.352	9.992	0.141	0.178
	12-25	77.15	.375	.382	9.965	.167	.183
	28-31	35.18	.161	.161	10.104	.028	.154
A2	35-38	72.09	.347	.352	10.000	.132	.168
A3	40-43	72.02	.346	↓	10.000	.333	.168
A4	46-49	72.04	.346	↓	10.003	.130	.164
A7	59-62	72.00	.347	↓	9.987	.145	.184
A8	65-68	72.17	.347	↓	9.982	.150	.190
A10	458-461	72.24	.348	↓	10.037	.095	.119
A11	696-699	72.89	.350	.355	10.035	.097	.120
B	947-950	35.50	0.162	0.163	10.106	0.026	0.142
	951-954	56.52	.264	.266	10.064	.068	.143
	955-958	68.91	.328	.332	10.027	.105	.147
	959-962	73.42	.353	.359	10.004	.128	.156
	963-966	75.56	.365	.371	9.999	.134	.153
	967-970	78.89	.384	.391	9.985	.148	.154
	971-974	81.77	.399	.407	9.975	.157	.152
A10 (with scoop)	12A-15A	73.10	0.408	0.358	9.960	0.172	0.164
	16A-19A	74.88	.420	.368	9.946	.186	.168
	20A-24A	78.32	.444	.389	9.921	.211	.173
	25A-28A	35.46	.184	.162	10.098	.034	.146
	29A-32A	56.42	.302	.266	10.043	.089	.147
	33A-36A	68.73	.378	.332	9.985	.147	.160
	37A-40A	81.33	.464	.406	9.911	.221	.168

TABLE 5.—TOTAL PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A
(READINGS 8 TO 11; AIRFLOW, 72.16 kg/sec)

[Pressures are in newtons per square centimeter.]

(A) INLET RAKE

%	CIRCUMFERENTIAL LOCATION, DEG								
SPAN	0	45	90	135	180	225	270	315	AVG
5.0	10.082	10.057	10.056	10.029	10.021	10.065	10.039	10.096	10.056
10.0	10.146	10.154	10.147	10.146	10.132	10.152	10.143	10.146	10.146
15.0	10.147	10.152	10.149	10.140	10.129	10.153	10.145	10.147	10.145
20.0	10.141	10.154	10.147	10.136	10.131	10.151	10.146	10.144	10.144
30.0	10.142	10.151	10.150	10.134	10.132	10.151	10.146	10.144	10.144
50.0	10.140	10.150	10.150	10.142	10.138	10.151	10.144	10.147	10.145
70.0	10.143	10.154	10.149	10.147	10.144	10.151	10.147	10.147	10.148
90.0	10.144	10.151	10.149	10.149	10.143	10.151	10.150	10.149	10.148

(B) INLET BOUNDARY LAYER RAKE

1.0	9.811	9.815	9.853	9.825	9.837	9.803	9.801	9.865	9.826
2.0	9.881	9.886	9.921	9.894	9.907	9.881	9.873	9.937	9.898
3.0	9.937	9.945	9.971	9.944	9.952	9.936	9.911	9.990	9.948
4.0	9.995	10.002	10.020	10.006	10.004	10.000	9.985	10.040	10.007
5.0	10.043	10.052	10.063	10.056	10.047	10.051	10.033	10.080	10.053
7.5	10.124	10.140	10.135	10.142	10.129	10.139	10.125	10.143	10.135
10.0	10.138	10.149	10.145	10.151	10.145	10.149	10.141	10.151	10.146
12.5	10.141	10.148	10.145	10.148	10.145	10.149	10.141	10.149	10.146

(C) EXIT RAKE

5.0	9.832	10.006	9.843	10.005	9.812	9.458	9.605	9.523	9.761
10.0	9.961	9.819	10.145	9.884	9.952	9.518	9.659	9.628	9.821
15.0	9.995	9.981	10.007	10.048	9.975	9.614	9.794	9.773	9.898
20.0	9.988	10.088	10.150	10.127	10.026	9.713	9.937	9.876	9.988
30.0	10.042	10.105	10.147	10.068	10.052	10.025	10.100	10.068	10.076
50.0	10.061	10.139	10.132	10.149	10.053	10.138	10.146	10.135	10.119
70.0	10.048	10.055	10.027	10.045	10.059	10.142	10.108	10.146	10.079
90.0	10.049	10.142	10.078	10.124	10.065	10.060	10.103	10.099	10.090

(D) EXIT BOUNDARY LAYER RAKE

1.0	9.621	10.030	9.600	9.937	9.610	9.429	9.541	9.455	9.653
2.0	9.678	10.014	9.710	9.924	9.669	9.441	9.575	9.474	9.686
3.0	9.727	10.004	9.770	9.945	9.726	9.450	9.591	9.488	9.713
4.0	9.775	10.001	9.789	9.979	9.779	9.455	9.601	9.502	9.735
5.0	9.819	9.983	9.891	9.993	9.828	9.464	9.607	9.516	9.763
7.5	9.912	9.853	10.102	9.896	9.914	9.486	9.627	9.560	9.794
10.0	9.962	9.851	10.149	9.877	9.954	9.519	9.663	9.623	9.825
12.5	9.981	9.932	10.139	10.144	9.989	9.940	9.916	9.699	9.967

TABLE 6.—TOTAL PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A
(READINGS 12 TO 15; AIRFLOW, 77.15 kg/sec)

[Pressures are in newtons per square centimeter.]

(A) INLET RAKE

% SPAN	CIRCUMFERENTIAL LOCATION, DEG 0	45	90	135	180	225	270	315	AVG
5.0	10.071	10.020	10.039	10.025	10.029	10.049	10.025	10.092	10.044
10.0	10.148	10.135	10.151	10.150	10.151	10.149	10.147	10.147	10.147
15.0	10.152	10.140	10.153	10.147	10.150	10.151	10.147	10.149	10.149
20.0	10.148	10.141	10.150	10.146	10.150	10.148	10.148	10.147	10.147
30.0	10.144	10.143	10.151	10.141	10.145	10.148	10.147	10.144	10.146
50.0	10.144	10.143	10.151	10.146	10.152	10.149	10.143	10.148	10.147
70.0	10.149	10.149	10.151	10.149	10.153	10.149	10.146	10.137	10.148
90.0	10.152	10.148	10.152	10.151	10.152	10.148	10.151	10.152	10.151

(B) INLET BOUNDARY LAYER RAKE

1.0	9.825	9.772	9.816	9.770	9.787	9.763	9.752	9.136	9.703
2.0	9.915	9.857	9.902	9.848	9.866	9.852	9.833	9.119	9.774
3.0	9.980	9.926	9.961	9.906	9.916	9.917	9.892	9.106	9.825
4.0	10.040	9.996	10.021	9.975	9.978	9.993	9.965	9.104	9.884
5.0	10.083	10.052	10.072	10.030	10.027	10.051	10.021	9.104	9.930
7.5	10.145	10.140	10.146	10.126	10.126	10.143	10.126	9.096	10.006
10.0	10.148	10.146	10.148	10.136	10.149	10.151	10.146	9.078	10.013
12.5	10.144	10.146	10.152	10.133	10.150	10.150	10.149	9.145	10.021

(C) EXIT RAKE

5.0	9.760	9.997	9.763	9.989	9.743	9.349	9.518	9.402	9.690
10.0	9.929	9.775	10.134	9.861	9.911	9.411	9.586	9.526	9.767
15.0	9.957	9.961	9.974	10.033	9.941	9.527	9.741	9.704	9.855
20.0	9.953	10.085	10.150	10.126	10.000	9.649	9.902	9.843	9.963
30.0	10.016	10.095	10.151	10.046	10.029	10.021	10.097	10.050	10.063
50.0	10.041	10.143	10.133	10.145	10.030	10.143	10.145	10.133	10.114
70.0	10.021	10.047	10.008	10.030	10.038	10.150	10.106	10.145	10.068
90.0	10.027	10.150	10.076	10.124	10.046	10.049	10.092	10.107	10.084

(D) EXIT BOUNDARY LAYER RAKE

1.0	9.519	10.016	9.494	9.912	9.510	9.298	9.439	9.333	9.565
2.0	9.586	10.020	9.632	9.893	9.581	9.314	9.476	9.354	9.607
3.0	9.644	10.023	9.707	9.903	9.646	9.325	9.493	9.371	9.639
4.0	9.703	10.018	9.725	9.935	9.706	9.333	9.505	9.386	9.664
5.0	9.755	9.983	9.839	9.970	9.762	9.343	9.510	9.400	9.695
7.5	9.872	9.796	10.097	9.887	9.863	9.372	9.532	9.452	9.734
10.0	9.933	9.783	10.147	9.857	9.915	9.410	9.571	9.521	9.767
12.5	9.960	9.876	10.146	9.884	9.900	9.924	9.976	9.601	9.908

TABLE 7.—TOTAL PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A
(READINGS 28 TO 31; AIRFLOW, 35.18 kg/sec)

[Pressures are in newtons per square centimeter.]

(A) INLET RAKE

% SPAN	CIRCUMFERENTIAL LOCATION, DEG 0	45	90	135	180	225	270	315	AVG
5.0	10.121	10.109	10.109	10.114	10.111	10.111	10.115	10.126	10.115
10.0	10.136	10.132	10.136	10.137	10.134	10.132	10.137	10.138	10.135
15.0	10.136	10.132	10.137	10.136	10.133	10.132	10.136	10.139	10.135
20.0	10.135	10.133	10.136	10.135	10.133	10.133	10.137	10.138	10.135
30.0	10.137	10.132	10.136	10.133	10.133	10.133	10.136	10.138	10.135
50.0	10.136	10.132	10.137	10.135	10.136	10.132	10.136	10.137	10.135
70.0	10.137	10.134	10.136	10.138	10.137	10.131	10.136	10.138	10.136
90.0	10.136	10.132	10.137	10.138	10.136	10.133	10.136	10.138	10.136

(B) INLET BOUNDARY LAYER RAKE

1.0	10.074	10.065	10.069	10.064	10.071	10.065	10.065	10.071	10.068
2.0	10.089	10.080	10.084	10.078	10.086	10.081	10.080	10.086	10.083
3.0	10.101	10.091	10.094	10.087	10.096	10.092	10.090	10.097	10.094
4.0	10.112	10.102	10.102	10.099	10.109	10.105	10.102	10.109	10.105
5.0	10.121	10.112	10.112	10.108	10.117	10.116	10.113	10.118	10.115
7.5	10.137	10.132	10.131	10.125	10.135	10.134	10.132	10.133	10.132
10.0	10.137	10.136	10.136	10.127	10.136	10.138	10.136	10.133	10.135
12.5	10.137	10.137	10.136	10.127	10.136	10.138	10.136	10.133	10.135

(C) EXIT RAKE

5.0	10.072	10.101	10.076	10.097	10.068	10.010	10.032	10.021	10.059
10.0	10.099	10.074	10.136	10.080	10.094	10.020	10.045	10.042	10.074
15.0	10.100	10.106	10.110	10.115	10.097	10.038	10.070	10.070	10.088
20.0	10.094	10.123	10.138	10.128	10.105	10.054	10.088	10.088	10.102
30.0	10.110	10.129	10.139	10.113	10.111	10.111	10.124	10.121	10.120
50.0	10.112	10.137	10.134	10.134	10.111	10.135	10.137	10.133	10.129
70.0	10.109	10.121	10.113	10.116	10.112	10.137	10.132	10.136	10.122
90.0	10.107	10.137	10.130	10.130	10.115	10.122	10.126	10.129	10.124

(D) EXIT BOUNDARY LAYER RAKE

1.0	10.035	10.110	10.015	10.095	10.032	10.002	10.011	10.006	10.038
2.0	10.047	10.111	10.041	10.093	10.045	10.005	10.018	10.011	10.047
3.0	10.058	10.109	10.054	10.096	10.057	10.007	10.022	10.015	10.052
4.0	10.068	10.104	10.061	10.095	10.068	10.008	10.025	10.019	10.056
5.0	10.076	10.097	10.080	10.094	10.077	10.010	10.026	10.020	10.060
7.5	10.092	10.074	10.121	10.080	10.093	10.014	10.031	10.029	10.067
10.0	10.104	10.076	10.132	10.081	10.100	10.019	10.037	10.040	10.074
12.5	10.108	10.092	10.133	10.009	10.029	10.007	9.999	10.054	10.054

TABLE 8.—TOTAL PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A2
(READINGS 35 TO 38; AIRFLOW, 72.09 kg/sec)

[Pressures are in newtons per square centimeter.]

(A) INLET RAKE

%	CIRCUMFERENTIAL LOCATION, DEG								
SPAN	0	45	90	135	180	225	270	315	AVG
5.0	10.094	10.042	10.056	10.036	10.036	10.067	10.046	10.095	10.059
10.0	10.151	10.145	10.150	10.138	10.137	10.150	10.148	10.144	10.145
15.0	10.152	10.146	10.150	10.136	10.139	10.152	10.149	10.144	10.146
20.0	10.148	10.148	10.148	10.138	10.140	10.149	10.149	10.141	10.145
30.0	10.147	10.149	10.152	10.129	10.139	10.150	10.148	10.140	10.144
50.0	10.144	10.147	10.140	10.140	10.147	10.150	10.146	10.145	10.145
70.0	10.148	10.152	10.150	10.081	10.151	10.152	10.148	10.143	10.141
90.0	10.149	10.149	10.151	10.145	10.149	10.151	10.151	10.145	10.149

(B) INLET BOUNDARY LAYER RAKE

1.0	9.873	9.818	9.851	9.827	9.841	9.806	9.805	9.859	9.835
2.0	9.949	9.889	9.922	9.895	9.910	9.883	9.877	9.935	9.907
3.0	10.003	9.947	9.974	9.943	9.953	9.937	9.927	9.994	9.960
4.0	10.053	10.005	10.026	10.004	10.006	10.001	9.991	10.054	10.018
5.0	10.092	10.054	10.069	10.051	10.049	10.051	10.042	10.098	10.063
7.5	10.146	10.132	10.140	10.129	10.135	10.133	10.131	10.151	10.137
10.0	10.150	10.141	10.149	10.138	10.152	10.143	10.146	10.151	10.146
12.5	10.148	10.142	10.151	10.140	10.152	10.144	10.146	10.151	10.147

(C) EXIT RAKE

5.0	9.824	10.013	9.830	10.011	9.785	9.541	9.729	9.519	9.782
10.0	9.970	9.828	10.141	9.902	9.947	9.577	9.818	9.581	9.846
15.0	9.989	9.986	10.004	10.050	9.979	9.671	9.974	9.690	9.918
20.0	9.987	10.095	10.147	10.217	10.023	9.750	10.024	9.798	10.005
30.0	10.043	10.115	10.145	10.047	10.049	10.016	10.119	10.036	10.071
50.0	10.063	10.143	10.129	10.148	10.055	10.145	10.138	10.142	10.121
70.0	10.048	10.069	10.024	9.999	10.070	10.147	10.115	10.148	10.077
90.0	10.051	10.145	10.082	10.131	10.073	10.062	10.100	10.104	10.094

(D) EXIT BOUNDARY LAYER RAKE

1.0	9.606	10.021	9.535	9.955	9.576	9.513	9.610	9.480	9.662
2.0	9.660	10.016	9.677	9.936	9.629	9.532	9.657	9.497	9.700
3.0	9.708	10.012	9.763	9.942	9.682	9.540	9.683	9.506	9.729
4.0	9.758	10.016	9.786	9.967	9.734	9.543	9.705	9.512	9.753
5.0	9.800	10.004	9.878	9.991	9.784	9.544	9.723	9.520	9.781
7.5	9.905	9.857	10.104	9.918	9.888	9.553	9.763	9.542	9.816
10.0	9.963	9.844	10.149	9.899	9.940	9.581	9.815	9.581	9.846
12.5	9.984	9.926	10.148	9.910	9.916	9.907	9.907	9.630	9.916

TABLE 9.—TOTAL PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A3
(READINGS 40 TO 43; AIRFLOW, 72.02 kg/sec)

[Pressures are in newtons per square centimeter.]

(A) INLET RAKE

% SPAN	CIRCUMFERENTIAL LOCATION, DEG 0	45	90	135	180	225	270	315	AVG
5.0	10.093	10.055	10.062	10.048	9.992	10.047	10.049	10.101	10.056
10.0	10.154	10.147	10.151	10.154	10.100	10.143	10.148	10.149	10.143
15.0	10.155	10.146	10.152	10.152	10.103	10.145	10.149	10.149	10.144
20.0	10.151	10.146	10.149	10.150	10.105	10.144	10.149	10.147	10.143
30.0	10.150	10.145	10.151	10.148	10.119	10.145	10.149	10.145	10.144
50.0	10.144	10.144	10.152	10.147	10.145	10.146	10.146	10.148	10.146
70.0	10.147	10.147	10.151	10.150	10.151	10.146	10.149	10.148	10.148
90.0	10.149	10.145	10.150	10.149	10.151	10.145	10.151	10.148	10.149

(B) INLET BOUNDARY LAYER RAKE

1.0	9.871	9.814	9.854	9.817	9.777	9.805	9.810	9.861	9.826
2.0	9.947	9.887	9.922	9.889	9.840	9.882	9.883	9.935	9.898
3.0	10.003	9.943	9.974	9.940	9.878	9.925	9.935	9.993	9.949
4.0	10.053	10.003	10.025	10.004	9.922	10.001	9.998	10.049	10.007
5.0	10.093	10.050	10.067	10.054	9.954	10.051	10.045	10.094	10.051
7.5	10.150	10.128	10.142	10.141	10.009	10.135	10.134	10.145	10.123
10.0	10.153	10.139	10.152	10.151	10.019	10.147	10.149	10.146	10.132
12.5	10.150	10.139	10.152	10.148	10.013	10.148	10.150	10.145	10.131

(C) EXIT RAKE

5.0	9.818	10.002	9.815	10.008	9.767	9.552	9.712	9.534	9.776
10.0	9.967	9.823	10.147	9.898	9.911	9.598	9.845	9.593	9.848
15.0	9.984	9.985	10.018	10.051	9.912	9.693	10.031	9.698	9.922
20.0	9.979	10.093	10.152	10.137	9.973	9.849	10.014	9.807	10.000
30.0	10.038	10.111	10.150	10.061	10.018	10.024	10.128	10.032	10.070
50.0	10.060	10.145	10.133	10.150	10.046	10.147	10.144	10.139	10.120
70.0	10.047	10.074	10.032	10.039	10.065	10.149	10.121	10.148	10.084
90.0	10.049	10.146	10.082	10.129	10.069	10.067	10.109	10.102	10.094

(D) EXIT BOUNDARY LAYER RAKE

1.0	9.611	10.029	9.523	9.951	9.576	9.528	9.602	9.499	9.665
2.0	9.667	10.023	9.667	9.931	9.629	9.546	9.647	9.517	9.703
3.0	9.716	10.019	9.752	9.934	9.681	9.554	9.674	9.525	9.732
4.0	9.766	10.017	9.777	9.961	9.730	9.558	9.694	9.532	9.754
5.0	9.809	9.999	9.864	9.989	9.776	9.559	9.712	9.538	9.781
7.5	9.914	9.848	10.095	9.911	9.857	9.569	9.764	9.560	9.815
10.0	9.970	9.838	10.145	9.899	9.892	9.593	9.837	9.594	9.846
12.5	9.991	9.923	10.143	10.140	10.047	9.918	9.947	9.641	9.969

TABLE 10.—TOTAL PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A4
(READINGS 46 TO 49; AIRFLOW, 72.04 kg/sec)

[Pressures are in newtons per square centimeter.]

(A) INLET RAKE

%	CIRCUMFERENTIAL LOCATION, DEG								
SPAN	0	45	90	135	180	225	270	315	AVG
5.0	10.067	10.043	10.058	10.033	10.039	10.064	10.045	10.095	10.056
10.0	10.142	10.142	10.147	10.139	10.147	10.150	10.145	10.143	10.144
15.0	10.143	10.149	10.148	10.143	10.146	10.152	10.145	10.143	10.146
20.0	10.141	10.151	10.145	10.142	10.147	10.150	10.145	10.141	10.145
30.0	10.141	10.151	10.147	10.134	10.144	10.151	10.145	10.140	10.144
50.0	10.140	10.149	10.148	10.140	10.146	10.151	10.145	10.143	10.145
70.0	10.144	10.152	10.149	10.144	10.147	10.151	10.144	10.143	10.147
90.0	10.144	10.150	10.147	10.145	10.145	10.150	10.148	10.144	10.147

(B) INLET BOUNDARY LAYER RAKE

1.0	9.841	9.810	9.856	9.822	9.832	9.807	9.817	9.870	9.832
2.0	9.914	9.882	9.926	9.887	9.899	9.883	9.885	9.941	9.902
3.0	9.968	9.938	9.979	9.930	9.942	9.939	9.933	9.996	9.953
4.0	10.022	9.994	10.029	9.984	9.996	10.005	9.994	10.052	10.010
5.0	10.063	10.042	10.072	10.028	10.038	10.055	10.042	10.097	10.054
7.5	10.134	10.116	10.140	10.112	10.127	10.137	10.129	10.151	10.131
10.0	10.142	10.126	10.147	10.128	10.147	10.145	10.144	10.151	10.141
12.5	10.142	10.130	10.147	10.130	10.146	10.144	10.144	10.149	10.142

(C) EXIT RAKE

5.0	9.820	10.000	9.815	9.988	9.795	9.544	9.740	9.516	9.777
10.0	9.966	9.832	10.143	9.895	9.949	9.564	9.902	9.581	9.854
15.0	9.991	9.990	9.997	10.039	9.980	9.651	10.055	9.692	9.924
20.0	9.995	10.092	10.331	10.122	10.025	9.790	10.004	9.822	10.023
30.0	10.041	10.113	10.144	10.047	10.050	10.036	10.127	10.032	10.074
50.0	10.057	10.140	10.131	10.145	10.056	10.138	10.142	10.137	10.118
70.0	10.045	10.063	10.025	10.040	10.062	10.144	10.112	10.144	10.079
90.0	10.048	10.143	10.079	10.127	10.060	10.056	10.103	10.102	10.090

(D) EXIT BOUNDARY LAYER RAKE

1.0	9.612	10.010	9.541	9.942	9.591	9.527	9.626	9.494	9.668
2.0	9.669	10.007	9.675	9.921	9.650	9.544	9.669	9.510	9.706
3.0	9.720	10.006	9.761	9.928	9.705	9.549	9.699	9.516	9.735
4.0	9.771	10.009	9.785	9.954	9.759	9.548	9.723	9.521	9.759
5.0	9.812	10.003	9.871	9.978	9.810	9.545	9.749	9.527	9.787
7.5	9.906	9.867	10.105	9.907	9.903	9.544	9.823	9.543	9.825
10.0	9.955	9.847	10.152	9.881	9.948	9.563	9.914	9.579	9.855
12.5	9.981	9.932	10.148	9.940	10.017	9.927	9.918	9.624	9.936

TABLE 11.—TOTAL PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A7
(READINGS 59 TO 62; AIRFLOW, 72.00 kg/sec)

[Pressures are in newtons per square centimeter.]

(A) INLET RAKE

% SPAN	CIRCUMFERENTIAL LOCATION, DEG 0	45	90	135	180	225	270	315	AVG
5.0	10.066	10.049	10.081	10.037	10.034	10.065	10.042	10.087	10.058
10.0	10.141	10.141	10.150	10.146	10.148	10.147	10.144	10.147	10.145
15.0	10.148	10.143	10.149	10.146	10.147	10.147	10.144	10.145	10.146
20.0	10.144	10.145	10.144	10.145	10.149	10.145	10.144	10.144	10.145
30.0	10.143	10.146	10.143	10.141	10.144	10.145	10.144	10.141	10.143
50.0	10.141	10.144	10.145	10.144	10.147	10.145	10.144	10.144	10.144
70.0	10.146	10.147	10.144	10.146	10.150	10.147	10.144	10.146	10.146
90.0	10.148	10.146	10.145	10.146	10.147	10.146	10.146	10.146	10.146

(B) INLET BOUNDARY LAYER RAKE

1.0	9.836	9.815	9.867	9.812	9.842	9.815	9.814	9.873	9.834
2.0	9.910	9.887	9.940	9.881	9.908	9.890	9.885	9.942	9.905
3.0	9.967	9.942	9.993	9.933	9.952	9.944	9.934	9.996	9.958
4.0	10.024	10.000	10.045	9.995	10.005	10.008	9.995	10.049	10.015
5.0	10.067	10.050	10.087	10.043	10.049	10.057	10.043	10.092	10.061
7.5	10.138	10.131	10.146	10.135	10.133	10.137	10.130	10.146	10.137
10.0	10.143	10.145	10.150	10.147	10.148	10.146	10.145	10.147	10.147
12.5	10.142	10.147	10.150	10.146	10.146	10.147	10.146	10.146	10.146

(C) EXIT RAKE

5.0	9.771	9.933	9.673	9.881	9.750	9.597	9.808	9.615	9.753
10.0	9.960	9.840	10.085	9.812	9.934	9.674	9.790	9.659	9.844
15.0	9.980	9.963	10.150	9.983	9.972	9.811	9.791	9.775	9.928
20.0	9.992	10.066	10.052	10.073	10.013	9.868	9.753	9.887	9.963
30.0	10.044	10.138	10.144	10.102	10.048	10.051	9.857	10.024	10.051
50.0	10.050	10.143	10.148	10.143	10.042	10.147	10.127	10.134	10.117
70.0	10.041	10.084	10.042	10.046	10.053	10.144	10.118	10.142	10.084
90.0	10.040	10.145	10.093	10.122	10.065	10.066	10.106	10.094	10.091

(D) EXIT BOUNDARY LAYER RAKE

1.0	9.583	10.026	9.101	9.806	9.576	9.547	9.704	9.598	9.618
2.0	9.627	10.031	9.146	9.821	9.624	9.570	9.754	9.618	9.649
3.0	9.668	10.021	9.242	9.816	9.671	9.580	9.780	9.624	9.675
4.0	9.715	9.983	9.470	9.835	9.721	9.583	9.782	9.622	9.714
5.0	9.760	9.929	9.719	9.871	9.773	9.586	9.800	9.620	9.757
7.5	9.880	9.813	9.953	9.852	9.885	9.612	9.806	9.626	9.803
10.0	9.956	9.842	10.101	9.830	9.946	9.656	9.803	9.663	9.850
12.5	9.988	9.908	10.145	10.035	9.963	9.961	9.942	9.715	9.957

TABLE 12.—TOTAL PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A8
(READINGS 65 TO 68; AIRFLOW, 72.17 kg/sec)

[Pressures are in newtons per square centimeter.]

(A) INLET RAKE

% SPAN	CIRCUMFERENTIAL LOCATION, DEG 0	45	90	135	180	225	270	315	AVG
5.0	10.063	10.038	10.072	10.027	10.045	10.097	10.044	10.090	10.060
10.0	10.138	10.147	10.152	10.143	10.147	10.151	10.144	10.143	10.146
15.0	10.144	10.148	10.152	10.142	10.147	10.149	10.144	10.142	10.146
20.0	10.143	10.148	10.147	10.140	10.147	10.147	10.146	10.139	10.145
30.0	10.144	10.143	10.141	10.141	10.142	10.143	10.146	10.137	10.142
50.0	10.141	10.146	10.145	10.141	10.145	10.146	10.146	10.142	10.144
70.0	10.145	10.149	10.148	10.143	10.148	10.147	10.147	10.142	10.146
90.0	10.145	10.149	10.148	10.144	10.147	10.149	10.149	10.143	10.147

(B) INLET BOUNDARY LAYER RAKE

1.0	9.841	9.810	9.846	9.820	9.845	9.810	9.804	9.814	9.824
2.0	9.912	9.881	9.917	9.898	9.914	9.885	9.877	9.884	9.896
3.0	9.967	9.938	9.976	9.950	9.958	9.939	9.929	9.939	9.950
4.0	10.020	9.996	10.034	10.014	10.013	10.004	9.992	9.997	10.009
5.0	10.065	10.046	10.081	10.062	10.055	10.053	10.040	10.044	10.056
7.5	10.134	10.129	10.147	10.142	10.135	10.137	10.129	10.127	10.135
10.0	10.143	10.140	10.152	10.150	10.150	10.143	10.145	10.140	10.146
12.5	10.142	10.141	10.140	10.149	10.149	10.143	10.145	10.143	10.144

(C) EXIT RAKE

5.0	9.771	9.976	9.621	9.915	9.762	9.521	9.805	9.563	9.742
10.0	9.965	9.851	10.092	9.816	9.936	9.579	9.870	9.616	9.841
15.0	9.986	9.984	10.053	9.988	9.978	9.683	9.912	9.707	9.911
20.0	9.942	10.109	10.144	10.111	10.019	9.689	9.837	9.745	9.949
30.0	10.041	10.083	10.140	10.053	10.045	10.017	10.056	10.021	10.057
50.0	10.064	10.141	10.101	10.143	10.053	10.144	10.125	10.132	10.113
70.0	10.050	10.043	10.028	10.022	10.072	10.147	10.124	10.147	10.079
90.0	10.042	10.143	10.059	10.136	10.071	10.053	10.114	10.080	10.087

(D) EXIT BOUNDARY LAYER RAKE

1.0	9.574	10.034	9.388	9.879	9.573	9.484	9.679	9.524	9.642
2.0	9.622	10.067	9.434	9.853	9.624	9.501	9.737	9.543	9.673
3.0	9.669	10.070	9.492	9.832	9.675	9.512	9.767	9.550	9.696
4.0	9.718	10.024	9.564	9.856	9.725	9.517	9.788	9.556	9.719
5.0	9.766	9.957	9.657	9.905	9.775	9.523	9.806	9.559	9.744
7.5	9.887	9.838	9.933	9.861	9.878	9.541	9.840	9.574	9.794
10.0	9.955	9.877	10.124	9.813	9.934	9.574	9.869	9.606	9.844
12.5	9.984	9.944	10.153	9.931	9.952	9.935	9.937	9.649	9.936

TABLE 13.—TOTAL PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A10
(READINGS 458 TO 461; AIRFLOW, 72.24 kg/sec)

[Pressures are in newtons per square centimeter.]

(A) INLET RAKE

% SPAN	CIRCUMFERENTIAL LOCATION, DEG 0	45	90	135	180	225	270	315	AVG
5.0	10.095	10.039	10.046	10.039	10.038	10.093	10.093	10.093	10.067
10.0	10.146	10.147	10.148	10.146	10.146	10.145	10.147	10.146	10.146
15.0	10.146	10.148	10.146	10.146	10.146	10.144	10.144	10.145	10.146
20.0	10.144	10.148	10.146	10.147	10.147	10.140	10.143	10.142	10.144
30.0	10.140	10.146	10.143	10.145	10.145	10.139	10.140	10.141	10.142
50.0	10.141	10.144	10.141	10.143	10.143	10.141	10.142	10.142	10.142
70.0	10.143	10.140	10.140	10.140	10.140	10.142	10.144	10.144	10.142
90.0	10.144	10.145	10.142	10.142	10.142	10.142	10.143	10.143	10.143

(B) INLET BOUNDARY LAYER RAKE

1.0	9.798	9.796	9.800	9.807	9.807	9.814	9.810	9.799	9.804
2.0	9.872	9.871	9.874	9.881	9.881	9.891	9.886	9.873	9.879
3.0	9.931	9.928	9.930	9.934	9.931	9.943	9.937	9.929	9.933
4.0	9.991	9.983	9.988	9.998	9.992	10.006	10.002	9.986	9.993
5.0	10.036	10.031	10.033	10.046	10.041	10.053	10.048	10.031	10.040
7.5	10.124	10.116	10.121	10.134	10.129	10.136	10.132	10.120	10.127
10.0	10.136	10.131	10.135	10.148	10.142	10.147	10.146	10.135	10.140
12.5	10.140	10.132	10.138	10.148	10.144	10.148	10.147	10.137	10.142

(C) EXIT RAKE

5.0	9.831	9.788	9.684	9.967	9.781	9.867	9.804	9.847	9.821
10.0	9.894	9.808	10.082	9.877	9.901	9.969	9.904	9.938	9.922
15.0	9.948	9.875	10.078	9.906	9.907	10.080	10.029	10.021	9.981
20.0	9.927	9.994	10.147	10.120	10.012	10.040	9.992	9.990	10.028
30.0	10.072	10.147	10.136	10.144	10.137	10.067	10.124	10.107	10.117
50.0	10.131	10.138	10.136	10.127	10.138	10.122	10.139	10.128	10.132
70.0	10.131	10.073	10.126	10.071	10.146	10.145	10.123	10.139	10.119
90.0	10.125	10.142	10.093	10.142	10.113	10.050	10.100	10.089	10.107

(D) EXIT BOUNDARY LAYER RAKE

1.0	9.613	9.772	9.469	9.799	9.691	9.769	9.689	9.757	9.695
2.0	9.662	9.778	9.510	9.899	9.741	9.809	9.742	9.797	9.742
3.0	9.709	9.775	9.564	9.966	9.773	9.831	9.773	9.818	9.776
4.0	9.753	9.782	9.634	9.976	9.805	9.846	9.791	9.833	9.803
5.0	9.791	9.792	9.712	9.951	9.826	9.864	9.809	9.844	9.824
7.5	9.871	9.784	9.956	9.895	9.861	9.913	9.851	9.882	9.877
10.0	9.892	9.812	10.103	9.875	9.890	9.969	9.903	9.935	9.922
12.5	9.885	9.849	10.144	10.053	10.205	9.977	9.969	9.986	10.008

TABLE 14.—TOTAL PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A11
(READINGS 696 TO 699; AIRFLOW, 72.87 kg/sec)

[Pressures are in newtons per square centimeter.]

(A) INLET RAKE

% SPAN	CIRCUMFERENTIAL LOCATION, DEG 0	45	90	135	180	225	270	315	AVG
5.0	10.096	10.031	10.054	10.050	10.037	10.053	10.045	10.089	10.057
10.0	10.156	10.129	10.150	10.154	10.151	10.137	10.149	10.149	10.147
15.0	10.157	10.134	10.152	10.152	10.151	10.137	10.146	10.150	10.147
20.0	10.151	10.136	10.149	10.151	10.150	10.134	10.144	10.146	10.145
30.0	10.148	10.136	10.146	10.149	10.146	10.136	10.142	10.142	10.143
50.0	10.140	10.134	10.147	10.148	10.154	10.138	10.145	10.145	10.144
70.0	10.150	10.139	10.144	10.148	10.155	10.139	10.146	10.145	10.146
90.0	10.153	10.136	10.145	10.150	10.153	10.138	10.148	10.149	10.147

(B) INLET BOUNDARY LAYER RAKE

1.0	9.868	9.811	9.851	9.801	9.827	9.820	9.818	9.855	9.831
2.0	9.946	9.883	9.921	9.873	9.892	9.898	9.890	9.926	9.904
3.0	10.002	9.942	9.973	9.924	9.934	9.952	9.939	9.981	9.956
4.0	10.056	9.999	10.025	9.990	9.987	10.016	10.002	10.037	10.014
5.0	10.098	10.046	10.067	10.040	10.032	10.064	10.050	10.081	10.060
7.5	10.148	10.130	10.143	10.132	10.122	10.142	10.141	10.138	10.137
10.0	10.151	10.142	10.154	10.143	10.144	10.147	10.155	10.140	10.147
12.5	10.149	10.145	10.156	10.140	10.144	10.149	10.153	10.140	10.147

(C) EXIT RAKE

5.0	9.765	9.809	9.444	9.937	9.646	9.877	9.888	9.847	9.777
10.0	9.874	9.838	9.949	9.877	9.896	9.986	9.986	9.954	9.920
15.0	9.927	9.901	10.152	9.987	9.920	10.086	10.083	10.048	10.013
20.0	9.951	10.056	10.148	10.107	9.987	10.049	10.025	10.013	10.042
30.0	10.136	10.151	10.042	10.148	10.133	10.069	10.136	10.094	10.114
50.0	10.127	10.145	10.113	10.126	10.134	10.099	10.147	10.105	10.125
70.0	10.136	10.103	10.137	10.121	10.140	10.155	10.148	10.142	10.135
90.0	10.132	10.151	10.102	10.145	10.135	10.052	10.170	10.044	10.116

(D) EXIT BOUNDARY LAYER RAKE

1.0	9.634	9.789	9.356	9.906	9.586	9.761	9.750	9.755	9.692
2.0	9.691	9.848	9.397	10.058	9.716	9.887	9.844	9.804	9.781
3.0	9.713	9.845	9.385	10.019	9.673	9.823	9.839	9.818	9.764
4.0	9.745	9.826	9.412	9.974	9.714	9.845	9.860	9.834	9.776
5.0	9.773	9.790	9.449	9.921	9.755	9.865	9.878	9.849	9.785
7.5	9.836	9.794	9.665	9.874	9.853	9.918	9.921	9.894	9.844
10.0	9.882	9.834	9.987	9.880	9.912	9.977	9.975	9.954	9.925
12.5	9.913	9.857	10.128	10.180	10.173	10.038	10.172	10.008	10.059

TABLE 15.—TOTAL PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE B
(READINGS 947 TO 950; AIRFLOW, 35.50 kg/sec)

[Pressures are in newtons per square centimeter.]

(A) INLET RAKE

% SPAN	CIRCUMFERENTIAL LOCATION, DEG 0	45	90	135	180	225	270	315	AVG
5.0	10.117	10.115	10.116	10.111	10.105	10.117	10.114	10.121	10.115
10.0	10.133	10.138	10.139	10.135	10.131	10.138	10.138	10.135	10.136
15.0	10.132	10.139	10.139	10.135	10.130	10.139	10.138	10.135	10.136
20.0	10.132	10.138	10.139	10.133	10.131	10.138	10.138	10.133	10.135
30.0	10.129	10.138	10.139	10.134	10.129	10.138	10.137	10.132	10.134
50.0	10.127	10.138	10.139	10.133	10.131	10.139	10.138	10.134	10.135
70.0	10.130	10.140	10.139	10.134	10.132	10.141	10.138	10.134	10.136
90.0	10.130	10.139	10.137	10.135	10.131	10.139	10.139	10.134	10.135

(B) INLET BOUNDARY LAYER RAKE

1.0	10.075	10.062	10.065	10.068	10.068	10.066	10.061	10.075	10.067
2.0	10.091	10.078	10.079	10.082	10.082	10.081	10.075	10.089	10.082
3.0	10.105	10.090	10.090	10.092	10.091	10.091	10.085	10.101	10.093
4.0	10.115	10.102	10.102	10.105	10.103	10.105	10.098	10.113	10.105
5.0	10.126	10.112	10.111	10.115	10.113	10.115	10.108	10.122	10.115
7.5	10.140	10.128	10.130	10.131	10.132	10.133	10.128	10.138	10.132
10.0	10.141	10.130	10.133	10.133	10.138	10.135	10.132	10.140	10.135
12.5	10.141	10.131	10.132	10.132	10.138	10.135	10.131	10.140	10.135

(C) EXIT RAKE

5.0	10.077	10.083	9.996	10.087	10.079	10.048	10.055	10.063	10.061
10.0	10.086	10.065	10.070	10.079	10.087	10.072	10.067	10.085	10.076
15.0	10.105	10.096	10.135	10.104	10.105	10.092	10.082	10.104	10.103
20.0	10.104	10.108	10.122	10.128	10.128	10.090	10.085	10.101	10.108
30.0	10.131	10.110	10.135	10.115	10.131	10.119	10.124	10.125	10.124
50.0	10.127	10.110	10.109	10.113	10.127	10.129	10.120	10.126	10.120
70.0	10.124	10.126	10.130	10.120	10.133	10.115	10.124	10.118	10.124
90.0	10.136	10.126	10.117	10.129	10.134	10.115	10.129	10.117	10.125

(D) EXIT BOUNDARY LAYER RAKE

1.0	10.046	10.063	9.990	10.063	10.043	10.035	10.039	10.035	10.039
2.0	10.061	10.082	9.997	10.103	10.088	10.101	10.128	10.047	10.076
3.0	10.065	10.091	9.990	10.090	10.066	10.047	10.054	10.050	10.057
4.0	10.069	10.094	9.994	10.086	10.073	10.051	10.056	10.054	10.060
5.0	10.072	10.086	10.002	10.076	10.075	10.055	10.059	10.057	10.060
7.5	10.076	10.068	10.037	10.067	10.079	10.065	10.064	10.068	10.065
10.0	10.081	10.071	10.083	10.071	10.084	10.077	10.070	10.079	10.077
12.5	10.089	10.081	10.130	10.013	10.058	10.027	10.033	10.089	10.065

TABLE 16.—TOTAL PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE B
(READINGS 951 TO 954; AIRFLOW, 56.52 kg/sec)

[Pressures are in newtons per square centimeter.]

(A) INLET RAKE

%	CIRCUMFERENTIAL LOCATION, DEG								
SPAN	0	45	90	135	180	225	270	315	AVG
5.0	10.116	10.083	10.094	10.086	10.075	10.085	10.082	10.107	10.091
10.0	10.145	10.138	10.142	10.141	10.142	10.126	10.141	10.142	10.140
15.0	10.146	10.141	10.143	10.141	10.143	10.137	10.141	10.142	10.142
20.0	10.143	10.140	10.142	10.139	10.143	10.137	10.139	10.140	10.140
30.0	10.128	10.138	10.140	10.139	10.139	10.139	10.137	10.136	10.137
50.0	10.135	10.138	10.142	10.137	10.143	10.140	10.139	10.139	10.139
70.0	10.140	10.139	10.139	10.139	10.145	10.140	10.139	10.138	10.140
90.0	10.142	10.137	10.138	10.141	10.143	10.138	10.140	10.139	10.140

(B) INLET BOUNDARY LAYER RAKE

1.0	9.981	9.960	9.985	9.957	9.952	9.958	9.958	9.983	9.966
2.0	10.024	10.000	10.023	9.996	9.988	10.000	9.997	10.022	10.006
3.0	10.057	10.030	10.050	10.025	10.013	10.029	10.024	10.051	10.035
4.0	10.090	10.062	10.077	10.059	10.042	10.064	10.057	10.081	10.067
5.0	10.114	10.087	10.101	10.086	10.066	10.090	10.085	10.104	10.092
7.5	10.143	10.133	10.140	10.133	10.118	10.133	10.136	10.138	10.134
10.0	10.144	10.140	10.147	10.138	10.131	10.139	10.145	10.141	10.141
12.5	10.144	10.142	10.147	10.139	10.134	10.140	10.145	10.142	10.141

(C) EXIT RAKE

5.0	9.976	10.034	9.680	10.020	9.984	9.924	9.933	9.932	9.935
10.0	9.995	9.965	9.866	9.982	9.999	9.995	9.973	9.998	9.972
15.0	10.045	10.044	10.136	10.072	10.051	10.048	10.037	10.046	10.060
20.0	10.067	10.113	10.102	10.112	10.104	10.048	10.058	10.052	10.082
30.0	10.095	10.099	10.150	10.073	10.136	10.120	10.114	10.115	10.113
50.0	10.113	10.104	10.075	10.085	10.113	10.139	10.117	10.097	10.105
70.0	10.099	10.132	10.135	10.130	10.106	10.095	10.112	10.088	10.112
90.0	10.106	10.118	10.095	10.103	10.111	10.090	10.113	10.089	10.103

(D) EXIT BOUNDARY LAYER RAKE

1.0	9.910	9.945	9.661	9.961	9.905	9.865	9.858	9.876	9.873
2.0	9.945	9.990	9.680	10.050	10.000	10.015	10.081	9.901	9.958
3.0	9.959	10.016	9.670	10.031	9.966	9.899	9.908	9.911	9.920
4.0	9.969	10.037	9.674	10.035	9.981	9.909	9.919	9.924	9.931
5.0	9.976	10.030	9.684	10.012	9.989	9.920	9.927	9.934	9.934
7.5	9.986	9.960	9.746	9.977	9.992	9.952	9.945	9.968	9.941
10.0	9.995	9.967	9.890	9.989	10.003	9.990	9.968	10.001	9.975
12.5	10.018	9.998	10.070	10.067	9.990	10.098	10.107	10.030	10.047

TABLE 17.—TOTAL PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE B
(READINGS 955 TO 958; AIRFLOW, 68.91 kg/sec)

[Pressures are in newtons per square centimeter.]

(A) INLET RAKE

% SPAN	CIRCUMFERENTIAL LOCATION, DEG 0	45	90	135	180	225	270	315	AVG
5.0	10.105	10.068	10.081	10.060	10.019	10.079	10.055	10.095	10.070
10.0	10.147	10.147	10.150	10.144	10.140	10.146	10.146	10.144	10.145
15.0	10.146	10.150	10.151	10.142	10.140	10.147	10.145	10.141	10.145
20.0	10.142	10.148	10.149	10.141	10.140	10.146	10.144	10.139	10.144
30.0	10.136	10.146	10.146	10.141	10.134	10.147	10.142	10.133	10.141
50.0	10.131	10.145	10.145	10.140	10.140	10.149	10.144	10.137	10.141
70.0	10.139	10.147	10.144	10.139	10.144	10.149	10.146	10.137	10.143
90.0	10.142	10.146	10.142	10.141	10.142	10.147	10.146	10.138	10.143

(B) INLET BOUNDARY LAYER RAKE

1.0	9.899	9.850	9.898	9.865	9.846	9.855	9.855	9.899	9.871
2.0	9.967	9.909	9.959	9.928	9.915	9.921	9.915	9.961	9.934
3.0	10.016	9.956	10.004	9.973	9.953	9.966	9.956	10.011	9.979
4.0	10.062	10.004	10.050	10.029	10.001	10.021	10.009	10.061	10.030
5.0	10.098	10.044	10.086	10.071	10.041	10.062	10.051	10.099	10.069
7.5	10.147	10.117	10.139	10.144	10.125	10.132	10.130	10.148	10.135
10.0	10.138	10.133	10.144	10.151	10.145	10.139	10.143	10.151	10.143
12.5	10.148	10.137	10.146	10.151	10.144	10.139	10.143	10.150	10.145

(C) EXIT RAKE

5.0	9.891	9.975	9.437	9.983	9.905	9.789	9.825	9.805	9.826
10.0	9.921	9.861	9.739	9.912	9.926	9.901	9.901	9.913	9.884
15.0	10.000	9.988	10.133	10.039	10.010	10.005	10.022	9.998	10.024
20.0	10.041	10.106	10.074	10.114	10.094	9.998	10.029	9.996	10.057
30.0	10.106	10.062	10.149	10.050	10.143	10.129	10.081	10.118	10.105
50.0	10.116	10.083	10.038	10.063	10.103	10.118	10.111	10.076	10.089
70.0	10.089	10.124	10.130	10.125	10.086	10.068	10.088	10.068	10.097
90.0	10.091	10.095	10.066	10.084	10.105	10.053	10.089	10.066	10.081

(D) EXIT BOUNDARY LAYER RAKE

1.0	9.768	9.843	9.389	9.872	9.775	9.716	9.732	9.713	9.726
2.0	9.822	9.915	9.409	9.996	9.901	10.026	10.068	9.748	9.861
3.0	9.938	10.021	9.558	9.976	9.868	9.763	9.797	9.875	9.849
4.0	9.866	9.983	9.423	9.984	9.890	9.776	9.816	9.781	9.815
5.0	9.878	9.980	9.447	9.953	9.901	9.793	9.829	9.798	9.822
7.5	9.897	9.870	9.577	9.894	9.906	9.840	9.861	9.849	9.837
10.0	9.914	9.879	9.809	9.917	9.921	9.901	9.906	9.904	9.894
12.5	9.945	9.926	10.062	10.149	10.014	9.940	10.061	9.958	10.007

TABLE 18.—TOTAL PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE B
(READINGS 959 TO 962; AIRFLOW, 73.42 kg/sec)

[Pressures are in newtons per square centimeter.]

(A) INLET RAKE

%	CIRCUMFERENTIAL LOCATION, DEG								
SPAN	0	45	90	135	180	225	270	315	AVG
5.0	10.104	10.046	10.074	10.051	10.025	10.063	10.043	10.090	10.062
10.0	10.154	10.139	10.149	10.149	10.147	10.140	10.146	10.146	10.146
15.0	10.156	10.142	10.149	10.151	10.149	10.143	10.144	10.147	10.148
20.0	10.149	10.143	10.146	10.146	10.148	10.139	10.143	10.145	10.145
30.0	10.144	10.141	10.145	10.145	10.141	10.140	10.139	10.139	10.142
50.0	10.138	10.138	10.144	10.145	10.149	10.143	10.142	10.144	10.143
70.0	10.146	10.142	10.142	10.147	10.153	10.144	10.144	10.144	10.145
90.0	10.149	10.140	10.140	10.148	10.149	10.142	10.144	10.146	10.145

(B) INLET BOUNDARY LAYER RAKE

1.0	9.858	9.818	9.859	9.811	9.809	9.820	9.806	9.848	9.829
2.0	9.936	9.890	9.932	9.887	9.877	9.896	9.880	9.922	9.903
3.0	9.995	9.949	9.986	9.940	9.924	9.949	9.932	9.980	9.957
4.0	10.050	10.006	10.039	10.003	9.968	10.012	9.998	10.038	10.014
5.0	10.092	10.055	10.082	10.052	10.026	10.058	10.047	10.083	10.062
7.5	10.147	10.137	10.147	10.138	10.119	10.139	10.138	10.141	10.138
10.0	10.150	10.148	10.154	10.145	10.141	10.146	10.152	10.144	10.148
12.5	10.147	10.149	10.154	10.144	10.141	10.147	10.150	10.144	10.147

(C) EXIT RAKE

5.0	9.835	9.949	9.308	9.948	9.853	9.729	9.780	9.736	9.767
10.0	9.873	9.814	9.699	9.878	9.877	9.855	9.877	9.864	9.842
15.0	9.963	9.952	10.137	10.020	9.975	9.998	10.026	9.971	10.005
20.0	10.012	10.106	10.048	10.105	10.074	9.997	10.002	9.966	10.039
30.0	10.090	10.043	10.151	10.012	10.131	10.105	10.072	10.121	10.091
50.0	10.107	10.083	10.033	10.049	10.085	10.078	10.094	10.056	10.073
70.0	10.072	10.127	10.133	10.116	10.069	10.060	10.093	10.051	10.090
90.0	10.071	10.101	10.053	10.073	10.089	10.050	10.117	10.049	10.075

(D) EXIT BOUNDARY LAYER RAKE

1.0	9.704	9.784	9.241	9.823	9.715	9.643	9.652	9.625	9.648
2.0	9.786	9.859	9.265	9.967	9.899	9.958	10.042	9.690	9.808
3.0	9.892	9.984	9.429	9.943	9.824	9.694	9.720	9.803	9.786
4.0	9.821	9.947	9.285	9.964	9.849	9.710	9.752	9.715	9.755
5.0	9.835	9.948	9.311	9.937	9.862	9.728	9.768	9.733	9.765
7.5	9.859	9.817	9.464	9.863	9.874	9.782	9.810	9.792	9.783
10.0	9.878	9.825	9.746	9.890	9.893	9.855	9.864	9.860	9.851
12.5	9.914	9.880	10.039	10.174	10.119	10.086	9.973	9.926	10.014

TABLE 19.—TOTAL PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE B
(READINGS 963 TO 966; AIRFLOW, 75.56 kg/sec)

[Pressures are in newtons per square centimeter.]

(A) INLET RAKE

% SPAN	CIRCUMFERENTIAL LOCATION, DEG 0	45	90	135	180	225	270	315	AVG
5.0	10.093	10.031	10.069	10.044	10.011	10.065	10.043	10.088	10.056
10.0	10.149	10.143	10.151	10.148	10.141	10.145	10.148	10.147	10.146
15.0	10.150	10.149	10.154	10.146	10.143	10.148	10.147	10.146	10.148
20.0	10.146	10.149	10.150	10.147	10.143	10.146	10.146	10.142	10.146
30.0	10.142	10.150	10.148	10.147	10.135	10.146	10.142	10.138	10.144
50.0	10.133	10.146	10.150	10.143	10.143	10.150	10.145	10.142	10.144
70.0	10.140	10.150	10.146	10.143	10.148	10.151	10.146	10.142	10.146
90.0	10.143	10.148	10.145	10.146	10.145	10.150	10.147	10.145	10.146

(B) INLET BOUNDARY LAYER RAKE

1.0	9.849	9.797	9.842	9.795	9.795	9.802	9.787	9.836	9.813
2.0	9.934	9.872	9.918	9.872	9.866	9.886	9.864	9.918	9.891
3.0	9.996	9.933	9.973	9.928	9.914	9.941	9.918	9.980	9.948
4.0	10.054	9.993	10.027	9.996	9.974	10.009	9.984	10.040	10.010
5.0	10.099	10.042	10.073	10.049	10.021	10.060	10.036	10.089	10.059
7.5	10.152	10.124	10.142	10.142	10.121	10.140	10.131	10.150	10.138
10.0	10.154	10.138	10.149	10.148	10.143	10.144	10.146	10.152	10.147
12.5	10.151	10.142	10.150	10.143	10.144	10.145	10.146	10.151	10.147

(C) EXIT RAKE

5.0	9.826	9.931	9.278	9.940	9.846	9.709	9.762	9.718	9.751
10.0	9.867	9.791	9.683	9.871	9.875	9.841	9.872	9.845	9.831
15.0	9.963	9.933	10.137	10.014	9.975	9.982	10.028	9.962	9.999
20.0	10.020	10.096	10.042	10.110	10.082	9.982	9.998	10.016	10.043
30.0	10.097	10.029	10.147	10.021	10.129	10.102	10.068	10.091	10.086
50.0	10.111	10.075	10.027	10.045	10.093	10.066	10.088	10.057	10.070
70.0	10.076	10.122	10.131	10.119	10.075	10.051	10.081	10.049	10.088
90.0	10.076	10.094	10.045	10.073	10.089	10.040	10.115	10.048	10.073

(D) EXIT BOUNDARY LAYER RAKE

1.0	9.676	9.770	9.212	9.813	9.689	9.621	9.634	9.613	9.629
2.0	9.742	9.851	9.239	9.959	9.863	9.835	9.944	9.660	9.762
3.0	9.864	9.970	9.384	9.934	9.803	9.675	9.716	9.778	9.765
4.0	9.799	9.939	9.255	9.950	9.830	9.691	9.739	9.691	9.737
5.0	9.816	9.942	9.284	9.918	9.845	9.708	9.757	9.708	9.747
7.5	9.842	9.805	9.446	9.844	9.858	9.763	9.801	9.767	9.766
10.0	9.862	9.812	9.736	9.875	9.875	9.835	9.862	9.837	9.837
12.5	9.899	9.869	10.042	10.190	10.048	10.120	10.046	9.905	10.015

TABLE 20.—TOTAL PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE B
(READINGS 967 TO 970; AIRFLOW, 78.89 kg/sec)

[Pressures are in newtons per square centimeter.]

(A) INLET RAKE

%	CIRCUMFERENTIAL LOCATION, DEG								
SPAN	0	45	90	135	180	225	270	315	AVG
5.0	10.092	10.014	10.064	10.031	10.002	10.048	10.027	10.092	10.046
10.0	10.154	10.137	10.155	10.150	10.149	10.140	10.149	10.152	10.148
15.0	10.158	10.141	10.155	10.151	10.150	10.144	10.148	10.151	10.150
20.0	10.150	10.143	10.150	10.146	10.150	10.140	10.148	10.149	10.147
30.0	10.142	10.140	10.150	10.143	10.142	10.144	10.144	10.142	10.143
50.0	10.139	10.141	10.152	10.146	10.148	10.147	10.148	10.147	10.146
70.0	10.148	10.147	10.149	10.150	10.154	10.150	10.148	10.149	10.149
90.0	10.151	10.143	10.147	10.151	10.152	10.146	10.149	10.150	10.149

(B) INLET BOUNDARY LAYER RAKE

1.0	9.815	9.761	9.807	9.771	9.756	9.774	9.751	9.819	9.782
2.0	9.910	9.845	9.896	9.855	9.833	9.865	9.835	9.901	9.867
3.0	9.980	9.911	9.960	9.916	9.883	9.925	9.893	9.965	9.929
4.0	10.046	9.975	10.022	9.990	9.946	9.999	9.966	10.027	9.996
5.0	10.094	10.030	10.073	10.045	10.000	10.054	10.022	10.079	10.049
7.5	10.152	10.121	10.149	10.142	10.118	10.143	10.130	10.143	10.137
10.0	10.155	10.137	10.157	10.150	10.149	10.149	10.148	10.147	10.149
12.5	10.153	10.141	10.158	10.148	10.149	10.151	10.149	10.147	10.149

(C) EXIT RAKE

5.0	9.784	9.930	9.173	9.933	9.807	9.657	9.722	9.670	9.709
10.0	9.833	9.777	9.634	9.841	9.833	9.803	9.844	9.813	9.797
15.0	9.940	9.931	10.137	10.002	9.941	9.974	10.022	9.942	9.986
20.0	9.999	10.123	10.003	10.099	10.072	9.985	10.031	9.960	10.034
30.0	10.087	10.027	10.147	10.003	10.121	10.121	10.068	10.097	10.084
50.0	10.104	10.069	10.020	10.041	10.085	10.053	10.071	10.046	10.061
70.0	10.064	10.123	10.135	10.119	10.064	10.046	10.082	10.041	10.084
90.0	10.062	10.098	10.039	10.060	10.076	10.037	10.114	10.044	10.066

(D) EXIT BOUNDARY LAYER RAKE

1.0	9.628	9.734	9.096	9.801	9.647	9.568	9.585	9.556	9.577
2.0	9.703	9.827	9.123	10.020	9.802	9.815	9.916	9.605	9.726
3.0	9.832	9.946	9.284	9.931	9.771	9.624	9.676	9.729	9.724
4.0	9.767	9.915	9.146	9.953	9.803	9.642	9.696	9.642	9.696
5.0	9.786	9.924	9.181	9.918	9.820	9.688	9.716	9.663	9.712
7.5	9.816	9.781	9.374	9.818	9.833	9.720	9.764	9.727	9.729
10.0	9.839	9.781	9.709	9.845	9.852	9.801	9.833	9.807	9.808
12.5	9.886	9.847	10.026	9.930	10.039	9.924	9.957	9.890	9.937

TABLE 21.—TOTAL PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE B
(READINGS 971 TO 974; AIRFLOW, 81.77 kg/sec)

[Pressures are in newtons per square centimeter.]

(A) INLET RAKE

% SPAN	CIRCUMFERENTIAL LOCATION, DEG 0	45	90	135	180	225	270	315	AVG
5.0	10.094	10.032	10.050	10.028	9.981	10.054	10.027	10.082	10.044
10.0	10.155	10.146	10.153	10.151	10.142	10.148	10.149	10.148	10.149
15.0	10.156	10.149	10.155	10.150	10.144	10.152	10.149	10.146	10.150
20.0	10.149	10.151	10.151	10.148	10.145	10.148	10.146	10.144	10.148
30.0	10.142	10.151	10.148	10.147	10.137	10.151	10.143	10.139	10.145
50.0	10.139	10.149	10.150	10.142	10.148	10.152	10.147	10.142	10.146
70.0	10.147	10.153	10.146	10.145	10.151	10.154	10.147	10.144	10.148
90.0	10.149	10.151	10.147	10.147	10.151	10.153	10.149	10.145	10.149

(B) INLET BOUNDARY LAYER RAKE

1.0	9.794	9.743	9.796	9.744	9.744	9.738	9.735	9.784	9.760
2.0	9.888	9.828	9.887	9.835	9.826	9.832	9.822	9.876	9.849
3.0	9.957	9.896	9.953	9.899	9.882	9.898	9.884	9.950	9.915
4.0	10.023	9.965	10.019	9.978	9.950	9.975	9.963	10.023	9.987
5.0	10.073	10.023	10.072	10.038	10.003	10.035	10.024	10.079	10.043
7.5	10.143	10.121	10.148	10.143	10.119	10.132	10.133	10.147	10.136
10.0	10.150	10.139	10.157	10.153	10.143	10.143	10.150	10.152	10.148
12.5	10.150	10.143	10.156	10.153	10.145	10.144	10.150	10.153	10.149

(C) EXIT RAKE

5.0	9.771	9.911	9.111	9.922	9.802	9.628	9.700	9.638	9.685
10.0	9.824	9.747	9.575	9.828	9.831	9.780	9.828	9.791	9.775
15.0	9.938	9.908	10.129	9.993	9.946	9.958	10.014	9.939	9.978
20.0	10.056	10.117	9.978	10.095	10.076	9.971	9.997	9.992	10.035
30.0	10.094	10.019	10.134	9.985	10.121	10.106	10.061	10.098	10.077
50.0	10.112	10.062	10.013	10.042	10.084	10.043	10.057	10.038	10.056
70.0	10.070	10.116	10.130	10.115	10.055	10.039	10.070	10.034	10.079
90.0	10.063	10.093	10.032	10.054	10.085	10.028	10.105	10.035	10.062

(D) EXIT BOUNDARY LAYER RAKE

1.0	9.598	9.713	9.050	9.783	9.618	9.538	9.554	9.525	9.547
2.0	9.676	9.804	9.077	10.014	9.800	9.701	9.969	9.574	9.702
3.0	9.803	9.928	9.236	9.914	9.750	9.600	9.655	9.702	9.699
4.0	9.738	9.899	9.097	9.936	9.781	9.616	9.681	9.617	9.671
5.0	9.759	9.912	9.131	9.898	9.797	9.635	9.704	9.636	9.684
7.5	9.792	9.757	9.323	9.803	9.808	9.692	9.757	9.705	9.705
10.0	9.821	9.757	9.655	9.834	9.828	9.772	9.826	9.789	9.785
12.5	9.867	9.823	10.026	10.001	9.941	9.878	9.873	9.876	9.911

TABLE 22.—TOTAL PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A10 WITH SCOOP
(READINGS 12A TO 15A; AIRFLOW, 73.10 kg/sec)

[Pressures are in newtons per square centimeter.]

(A) INLET RAKE

% SPAN	CIRCUMFERENTIAL LOCATION, DEG 0	45	90	135	180	225	270	315	AVG
5.0	10.133	10.085	10.127	10.100	10.099	10.127	10.110	10.133	10.114
10.0	10.139	10.128	10.146	10.127	10.136	10.136	10.142	10.140	10.137
15.0	10.143	10.130	10.146	10.136	10.137	10.137	10.138	10.141	10.138
20.0	10.133	10.129	10.141	10.138	10.135	10.132	10.137	10.136	10.135
30.0	10.127	10.132	10.136	10.140	10.131	10.134	10.132	10.131	10.133
50.0	10.130	10.130	10.138	10.136	10.139	10.138	10.137	10.134	10.135
70.0	10.134	10.138	10.137	10.135	10.139	10.140	10.137	10.134	10.136
90.0	10.134	10.133	10.137	10.138	10.137	10.135	10.137	10.134	10.135

(B) INLET BOUNDARY LAYER RAKE

1.0	9.907	9.857	9.912	9.835	9.838	9.865	9.886	9.878	9.872
2.0	10.003	9.948	9.998	9.928	9.924	9.963	9.963	9.980	9.963
3.0	10.072	10.019	10.053	9.995	9.985	10.028	10.012	10.055	10.027
4.0	10.121	10.081	10.099	10.070	10.058	10.092	10.073	10.108	10.088
5.0	10.140	10.112	10.128	10.110	10.101	10.121	10.111	10.126	10.118
7.5	10.142	10.133	10.141	10.133	10.132	10.133	10.135	10.136	10.136
10.0	10.142	10.136	10.144	10.132	10.135	10.136	10.140	10.140	10.138
12.5	10.138	10.136	10.147	10.132	10.135	10.134	10.138	10.141	10.138

(C) EXIT RAKE

5.0	9.887	9.894	9.570	9.940	9.832	9.815	9.871	9.811	9.827
10.0	9.919	9.906	9.563	9.954	9.899	9.814	9.918	9.812	9.848
15.0	9.931	9.946	9.591	9.979	9.911	9.867	9.938	9.864	9.878
20.0	9.960	10.008	9.712	10.079	9.975	9.867	9.881	9.968	9.931
30.0	10.090	10.129	10.047	10.228	10.072	10.092	9.934	10.095	10.086
50.0	10.052	10.058	9.779	10.105	10.043	10.074	9.956	10.098	10.021
70.0	10.044	9.932	9.849	9.990	10.027	10.107	9.908	10.107	9.995
90.0	9.943	9.945	9.879	9.921	9.960	9.888	9.836	9.860	9.904

(D) EXIT BOUNDARY LAYER RAKE

1.0	9.701	9.729	9.746	9.729	9.718	9.753	9.507	9.765	9.706
2.0	9.758	9.779	9.806	9.907	9.898	9.951	9.669	9.837	9.826
3.0	9.865	9.876	9.895	9.806	9.827	9.864	9.563	9.951	9.831
4.0	9.905	9.864	9.898	9.813	9.861	9.887	9.573	10.003	9.851
5.0	9.831	9.809	9.868	9.813	9.885	9.898	9.576	9.947	9.829
7.5	9.875	9.805	9.896	9.808	9.911	9.908	9.572	9.961	9.842
10.0	9.898	9.811	9.917	9.813	9.917	9.918	9.565	9.949	9.848
12.5	9.904	9.830	9.929	10.028	10.117	10.081	9.999	9.952	9.980

TABLE 23.—TOTAL PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A10 WITH SCOOP
(READINGS 16A TO 19A; AIRFLOW, 74.88 kg/sec)

[Pressures are in newtons per square centimeter.]

(A) INLET RAKE

% SPAN	CIRCUMFERENTIAL LOCATION, DEG 0	45	90	135	180	225	270	315	AVG
5.0	10.142	10.073	10.118	10.119	10.103	10.107	10.111	10.135	10.113
10.0	10.146	10.117	10.143	10.140	10.143	10.125	10.140	10.141	10.137
15.0	10.151	10.126	10.146	10.144	10.145	10.127	10.137	10.143	10.140
20.0	10.141	10.122	10.142	10.141	10.141	10.122	10.138	10.138	10.136
30.0	10.134	10.121	10.136	10.142	10.137	10.125	10.132	10.132	10.132
50.0	10.136	10.124	10.137	10.138	10.145	10.129	10.138	10.135	10.135
70.0	10.141	10.130	10.136	10.138	10.145	10.131	10.136	10.136	10.137
90.0	10.141	10.124	10.137	10.141	10.142	10.127	10.136	10.136	10.136

(B) INLET BOUNDARY LAYER RAKE

1.0	9.883	9.846	9.911	9.800	9.828	9.856	9.879	9.860	9.858
2.0	9.982	9.941	10.005	9.904	9.918	9.958	9.966	9.968	9.955
3.0	10.054	10.013	10.062	9.979	9.982	10.025	10.020	10.046	10.022
4.0	10.111	10.073	10.111	10.062	10.059	10.092	10.085	10.098	10.086
5.0	10.134	10.105	10.138	10.106	10.106	10.122	10.121	10.117	10.119
7.5	10.141	10.131	10.148	10.131	10.136	10.138	10.142	10.126	10.137
10.0	10.140	10.137	10.151	10.126	10.138	10.141	10.147	10.131	10.139
12.5	10.139	10.138	10.152	10.128	10.137	10.139	10.145	10.132	10.139

(C) EXIT RAKE

5.0	9.868	9.891	9.542	9.928	9.804	9.806	9.860	9.792	9.811
10.0	9.898	9.912	9.533	9.943	9.877	9.802	9.908	9.795	9.834
15.0	9.913	9.946	9.558	9.969	9.891	9.856	9.920	9.846	9.863
20.0	9.925	10.010	9.690	10.073	9.960	9.862	9.871	9.909	9.913
30.0	10.071	10.133	10.043	10.138	10.025	10.095	9.927	10.092	10.065
50.0	10.052	10.054	9.762	10.080	10.028	10.075	9.953	10.095	10.012
70.0	10.025	9.924	9.834	9.997	10.015	10.109	9.899	10.105	9.989
90.0	9.918	9.941	9.865	9.911	9.944	9.879	9.820	9.851	9.891

(D) EXIT BOUNDARY LAYER RAKE

1.0	9.682	9.710	9.715	9.722	9.697	9.730	9.462	9.753	9.684
2.0	9.742	9.768	9.778	9.904	9.811	9.931	9.648	9.829	9.801
3.0	9.854	9.867	9.881	9.799	9.811	9.853	9.520	9.935	9.815
4.0	9.931	9.867	9.876	9.805	9.849	9.879	9.530	10.092	9.854
5.0	9.820	9.800	9.846	9.804	9.876	9.890	9.532	9.946	9.814
7.5	9.865	9.792	9.875	9.796	9.904	9.898	9.531	9.961	9.828
10.0	9.890	9.798	9.898	9.800	9.908	9.905	9.525	9.948	9.834
12.5	9.895	9.820	9.911	10.030	9.936	10.070	10.123	9.950	9.967

TABLE 24.—TOTAL PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A10 WITH SCOOP
(READINGS 20A TO 24A; AIRFLOW, 78.32 kg/sec)

[Pressures are in newtons per square centimeter.]

(A) INLET RAKE

% SPAN	CIRCUMFERENTIAL LOCATION, DEG 0	45	90	135	180	225	270	315	AVG
5.0	10.133	10.086	10.125	10.117	10.086	10.124	10.118	10.132	10.115
10.0	10.137	10.134	10.149	10.135	10.129	10.141	10.143	10.134	10.138
15.0	10.139	10.137	10.150	10.139	10.132	10.139	10.140	10.135	10.139
20.0	10.129	10.134	10.147	10.137	10.128	10.132	10.142	10.132	10.135
30.0	10.122	10.136	10.140	10.137	10.123	10.136	10.136	10.128	10.132
50.0	10.123	10.134	10.141	10.134	10.130	10.141	10.141	10.133	10.135
70.0	10.130	10.141	10.139	10.133	10.133	10.141	10.141	10.132	10.136
90.0	10.120	10.136	10.142	10.135	10.131	10.139	10.141	10.133	10.135

(B) INLET BOUNDARY LAYER RAKE

1.0	9.873	9.828	9.802	9.794	9.809	9.832	9.837	9.849	9.828
2.0	9.984	9.937	9.918	9.897	9.909	9.945	9.924	9.968	9.935
3.0	10.062	10.020	10.004	9.973	9.980	10.018	9.979	10.053	10.011
4.0	10.122	10.088	10.074	10.057	10.064	10.092	10.047	10.110	10.082
5.0	10.143	10.121	10.106	10.102	10.113	10.123	10.091	10.128	10.116
7.5	10.147	10.138	10.124	10.134	10.142	10.134	10.125	10.138	10.135
10.0	10.147	10.139	10.135	10.131	10.143	10.136	10.134	10.143	10.138
12.5	10.144	10.138	10.139	10.129	10.141	10.134	10.121	10.144	10.136

(C) EXIT RAKE

5.0	9.845	9.858	9.468	9.915	9.774	9.753	9.820	9.762	9.774
10.0	9.877	9.892	9.463	9.929	9.853	9.755	9.877	9.746	9.799
15.0	9.896	9.927	9.490	9.957	9.871	9.816	9.898	9.818	9.834
20.0	9.889	9.994	9.634	10.073	9.951	9.825	9.842	9.844	9.881
30.0	10.077	10.127	10.022	10.140	10.020	10.080	9.899	10.090	10.057
50.0	10.028	10.020	9.710	10.085	10.023	10.056	9.928	10.092	9.993
70.0	10.026	9.862	9.788	9.979	10.009	10.090	9.855	10.101	9.964
90.0	9.900	9.898	9.819	9.894	9.938	9.833	9.772	9.819	9.859

(D) EXIT BOUNDARY LAYER RAKE

1.0	9.631	9.660	9.682	9.666	9.651	9.691	9.395	9.702	9.635
2.0	9.698	9.726	9.753	9.851	9.856	9.883	9.594	9.786	9.768
3.0	9.819	9.837	9.865	9.751	9.777	9.823	9.458	9.916	9.781
4.0	9.826	9.830	9.859	9.758	9.816	9.853	9.470	10.002	9.802
5.0	9.781	9.764	9.828	9.755	9.842	9.867	9.473	9.915	9.778
7.5	9.826	9.754	9.860	9.742	9.857	9.876	9.472	9.931	9.790
10.0	9.852	9.763	9.883	9.747	9.870	9.890	9.464	9.920	9.799
12.5	9.856	9.786	9.897	9.895	9.919	10.029	10.095	9.925	9.925

TABLE 25.—TOTAL PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A10 WITH SCOOP
(READINGS 25A TO 28A; AIRFLOW, 35.46 kg/sec)

[Pressures are in newtons per square centimeter.]

(A) INLET RAKE

% SPAN	CIRCUMFERENTIAL LOCATION, DEG 0	45	90	135	180	225	270	315	AVG
5.0	10.133	10.124	10.125	10.126	10.123	10.133	10.128	10.128	10.127
10.0	10.134	10.134	10.133	10.130	10.132	10.139	10.133	10.130	10.133
15.0	10.133	10.137	10.135	10.131	10.132	10.138	10.133	10.131	10.134
20.0	10.132	10.135	10.135	10.131	10.130	10.138	10.133	10.130	10.133
30.0	10.130	10.135	10.133	10.132	10.132	10.139	10.131	10.129	10.133
50.0	10.129	10.136	10.133	10.130	10.133	10.139	10.133	10.130	10.133
70.0	10.131	10.139	10.131	10.131	10.133	10.139	10.133	10.130	10.133
90.0	10.131	10.137	10.132	10.131	10.132	10.138	10.133	10.130	10.133

(B) INLET BOUNDARY LAYER RAKE

1.0	10.077	10.064	10.080	10.077	10.069	10.070	10.079	10.077	10.074
2.0	10.097	10.081	10.096	10.095	10.088	10.091	10.095	10.099	10.093
3.0	10.112	10.096	10.107	10.108	10.101	10.104	10.106	10.115	10.106
4.0	10.126	10.108	10.119	10.124	10.117	10.120	10.119	10.126	10.120
5.0	10.133	10.117	10.127	10.134	10.127	10.127	10.128	10.133	10.128
7.5	10.135	10.125	10.133	10.139	10.132	10.132	10.133	10.137	10.133
10.0	10.134	10.129	10.133	10.137	10.134	10.131	10.134	10.138	10.134
12.5	10.133	10.129	10.135	10.137	10.134	10.131	10.133	10.138	10.134

(C) EXIT RAKE

5.0	10.086	10.079	10.019	10.091	10.078	10.071	10.073	10.068	10.071
10.0	10.099	10.084	10.018	10.092	10.095	10.070	10.082	10.068	10.076
15.0	10.099	10.090	10.028	10.099	10.095	10.080	10.086	10.079	10.082
20.0	10.108	10.103	10.057	10.120	10.105	10.075	10.087	10.077	10.091
30.0	10.128	10.130	10.116	10.133	10.120	10.123	10.090	10.120	10.120
50.0	10.121	10.121	10.063	10.131	10.122	10.121	10.085	10.124	10.111
70.0	10.122	10.100	10.077	10.117	10.121	10.125	10.082	10.126	10.109
90.0	10.099	10.097	10.082	10.088	10.100	10.089	10.079	10.086	10.090

(D) EXIT BOUNDARY LAYER RAKE

1.0	10.044	10.052	10.054	10.051	10.042	10.050	10.011	10.053	10.045
2.0	10.056	10.062	10.068	10.096	10.087	10.095	10.058	10.067	10.074
3.0	10.082	10.086	10.094	10.067	10.065	10.072	10.022	10.095	10.073
4.0	10.087	10.087	10.096	10.069	10.073	10.079	10.024	10.112	10.078
5.0	10.074	10.069	10.082	10.069	10.077	10.081	10.025	10.090	10.071
7.5	10.083	10.068	10.086	10.068	10.087	10.084	10.025	10.092	10.074
10.0	10.087	10.069	10.091	10.069	10.092	10.085	10.025	10.090	10.076
12.5	10.088	10.073	10.093	10.056	10.030	10.014	10.028	10.092	10.059

TABLE 26.—TOTAL PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A10 WITH SCOOP
(READINGS 29A TO 32A; AIRFLOW, 56.42 kg/sec)

[Pressures are in newtons per square centimeter.]

(A) INLET RAKE

%	CIRCUMFERENTIAL LOCATION, DEG								
SPAN	0	45	90	135	180	225	270	315	AVG
5.0	10.122	10.126	10.129	10.110	10.094	10.149	10.126	10.121	10.122
10.0	10.124	10.147	10.142	10.124	10.120	10.156	10.141	10.115	10.134
15.0	10.127	10.153	10.143	10.127	10.123	10.156	10.139	10.115	10.135
20.0	10.120	10.155	10.142	10.126	10.122	10.154	10.139	10.124	10.135
30.0	10.115	10.154	10.138	10.126	10.119	10.155	10.135	10.121	10.133
50.0	10.116	10.153	10.140	10.123	10.122	10.157	10.138	10.121	10.134
70.0	10.120	10.157	10.137	10.123	10.124	10.157	10.138	10.121	10.134
90.0	10.121	10.154	10.137	10.123	10.122	10.155	10.138	10.121	10.134

(B) INLET BOUNDARY LAYER RAKE

1.0	9.995	9.962	9.996	9.987	9.973	9.977	9.986	10.018	9.987
2.0	10.048	10.009	10.044	10.036	10.021	10.029	10.030	10.074	10.036
3.0	10.087	10.045	10.074	10.072	10.056	10.065	10.058	10.116	10.072
4.0	10.119	10.074	10.102	10.113	10.097	10.101	10.092	10.145	10.105
5.0	10.135	10.091	10.119	10.137	10.120	10.116	10.112	10.156	10.123
7.5	10.141	10.106	10.127	10.152	10.134	10.123	10.122	10.158	10.133
10.0	10.141	10.114	10.128	10.152	10.136	10.126	10.126	10.158	10.135
12.5	10.140	10.117	10.128	10.151	10.136	10.124	10.124	10.159	10.135

(C) EXIT RAKE

5.0	10.028	9.992	9.823	10.033	9.999	9.956	9.980	9.968	9.973
10.0	10.049	10.000	9.823	10.040	10.037	9.954	10.004	9.970	9.985
15.0	10.052	10.014	9.844	10.057	10.041	9.982	10.015	9.998	10.000
20.0	10.034	10.045	9.915	10.110	10.071	10.036	10.026	10.025	10.033
30.0	10.130	10.118	10.082	10.139	10.108	10.096	10.018	10.113	10.101
50.0	10.112	10.088	9.943	10.129	10.116	10.092	10.017	10.120	10.077
70.0	10.115	10.026	9.983	10.085	10.102	10.107	10.002	10.124	10.068
90.0	10.057	10.027	9.995	10.026	10.068	10.002	9.978	10.008	10.020

(D) EXIT BOUNDARY LAYER RAKE

1.0	9.895	9.927	9.947	9.909	9.901	9.930	9.825	9.919	9.907
2.0	9.928	9.957	9.980	9.955	10.010	10.042	9.923	9.956	9.969
3.0	9.987	10.008	10.035	9.951	9.961	9.992	9.854	10.019	9.976
4.0	10.008	10.016	10.037	9.956	9.980	10.005	9.859	10.081	9.993
5.0	9.970	9.973	10.016	9.955	9.993	10.011	9.861	10.017	9.974
7.5	9.993	9.970	10.028	9.952	10.011	10.016	9.861	10.025	9.982
10.0	10.005	9.973	10.038	9.956	10.015	10.017	9.860	10.018	9.985
12.5	10.006	9.985	10.044	10.077	10.040	10.034	10.079	10.023	10.042

TABLE 27.—TOTAL PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A10 WITH SCOOP
(READINGS 33A TO 36A; AIRFLOW, 68.73 kg/sec)

[Pressures are in newtons per square centimeter.]

(A) INLET RAKE

% SPAN	CIRCUMFERENTIAL LOCATION, DEG 0	45	90	135	180	225	270	315	AVG
5.0	10.131	10.114	10.118	10.111	10.101	10.125	10.114	10.135	10.119
10.0	10.139	10.139	10.142	10.132	10.136	10.138	10.138	10.136	10.137
15.0	10.142	10.138	10.142	10.136	10.139	10.136	10.135	10.136	10.138
20.0	10.134	10.135	10.138	10.136	10.137	10.132	10.135	10.133	10.135
30.0	10.129	10.135	10.131	10.134	10.133	10.135	10.130	10.129	10.132
50.0	10.129	10.135	10.135	10.133	10.137	10.138	10.134	10.132	10.134
70.0	10.133	10.138	10.133	10.132	10.140	10.138	10.132	10.132	10.135
90.0	10.136	10.133	10.133	10.133	10.137	10.136	10.134	10.132	10.134

(B) INLET BOUNDARY LAYER RAKE

1.0	9.920	9.896	9.936	9.898	9.880	9.904	9.919	9.933	9.911
2.0	10.001	9.973	10.012	9.975	9.953	9.985	9.988	10.020	9.988
3.0	10.062	10.032	10.059	10.030	10.005	10.038	10.032	10.082	10.042
4.0	10.108	10.082	10.105	10.092	10.068	10.094	10.085	10.125	10.095
5.0	10.130	10.109	10.131	10.123	10.106	10.120	10.117	10.138	10.122
7.5	10.138	10.129	10.142	10.140	10.131	10.133	10.135	10.139	10.136
10.0	10.137	10.132	10.145	10.136	10.134	10.136	10.141	10.140	10.138
12.5	10.135	10.133	10.146	10.136	10.133	10.135	10.138	10.141	10.137

(C) EXIT RAKE

5.0	9.935	9.934	9.653	9.965	9.882	9.870	9.911	9.865	9.877
10.0	9.958	9.945	9.652	9.978	9.939	9.867	9.949	9.864	9.894
15.0	9.967	9.969	9.679	10.000	9.948	9.913	9.966	9.910	9.919
20.0	9.952	10.024	9.789	10.084	10.003	9.979	9.917	9.914	9.958
30.0	10.093	10.133	10.057	10.133	10.063	10.109	9.963	10.097	10.080
50.0	10.063	10.075	9.841	10.106	10.064	10.088	9.979	10.101	10.040
70.0	10.065	9.967	9.902	10.036	10.045	10.115	9.937	10.111	10.022
90.0	9.976	9.977	9.922	9.962	9.993	9.936	9.893	9.914	9.947

(D) EXIT BOUNDARY LAYER RAKE

1.0	9.770	9.801	9.802	9.799	9.784	9.809	9.605	9.816	9.773
2.0	9.819	9.846	9.854	9.937	9.945	9.975	9.769	9.876	9.878
3.0	9.905	9.919	9.934	9.864	9.878	9.907	9.650	9.969	9.879
4.0	9.935	9.928	9.933	9.871	9.906	9.926	9.657	10.054	9.901
5.0	9.884	9.868	9.908	9.870	9.926	9.936	9.660	9.975	9.878
7.5	9.918	9.860	9.932	9.864	9.949	9.940	9.660	9.988	9.889
10.0	9.938	9.865	9.950	9.867	9.954	9.944	9.655	9.977	9.894
12.5	9.942	9.884	9.962	10.095	9.980	9.987	9.929	9.983	9.970

TABLE 28.—TOTAL PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A10 WITH SCOOP
(READINGS 37A TO 40A; AIRFLOW, 81.33 kg/sec)

[Pressures are in newtons per square centimeter.]

(A) INLET RAKE

% SPAN	CIRCUMFERENTIAL LOCATION, DEG 0	45	90	135	180	225	270	315	AVG
5.0	10.142	10.081	10.118	10.110	10.085	10.118	10.114	10.137	10.113
10.0	10.146	10.117	10.134	10.137	10.135	10.136	10.131	10.138	10.134
15.0	10.150	10.124	10.148	10.141	10.138	10.135	10.126	10.139	10.138
20.0	10.137	10.125	10.143	10.138	10.137	10.129	10.139	10.135	10.136
30.0	10.129	10.126	10.137	10.139	10.132	10.135	10.133	10.130	10.133
50.0	10.131	10.132	10.139	10.135	10.142	10.139	10.138	10.136	10.136
70.0	10.137	10.139	10.137	10.133	10.144	10.139	10.138	10.133	10.137
90.0	10.139	10.132	10.138	10.138	10.142	10.135	10.139	10.135	10.137

(B) INLET BOUNDARY LAYER RAKE

1.0	9.850	9.814	9.872	9.773	9.775	9.816	9.837	9.836	9.822
2.0	9.966	9.925	9.977	9.890	9.879	9.934	9.930	9.961	9.933
3.0	10.049	10.010	10.042	9.975	9.956	10.013	9.991	10.052	10.011
4.0	10.114	10.083	10.100	10.066	10.043	10.090	10.065	10.112	10.084
5.0	10.139	10.120	10.134	10.117	10.096	10.123	10.110	10.131	10.121
7.5	10.145	10.139	10.146	10.142	10.133	10.137	10.139	10.137	10.139
10.0	10.143	10.140	10.151	10.135	10.137	10.140	10.144	10.140	10.141
12.5	10.140	10.139	10.151	10.135	10.136	10.136	10.143	10.139	10.140

(C) EXIT RAKE

5.0	9.836	9.843	9.424	9.890	9.757	9.740	9.809	9.734	9.754
10.0	9.858	9.877	9.419	9.911	9.833	9.740	9.865	9.737	9.780
15.0	9.880	9.921	9.454	9.938	9.853	9.802	9.890	9.801	9.817
20.0	9.874	9.993	9.608	10.057	9.937	9.883	9.832	9.879	9.883
30.0	10.072	10.130	10.021	10.135	10.024	10.083	9.886	10.085	10.055
50.0	10.015	10.020	9.686	10.063	10.015	10.056	9.926	10.085	9.983
70.0	10.017	9.852	9.767	9.972	10.001	10.097	9.834	10.090	9.954
90.0	9.887	9.886	9.800	9.876	9.914	9.817	9.751	9.801	9.842

(D) EXIT BOUNDARY LAYER RAKE

1.0	9.608	9.649	9.650	9.646	9.634	9.667	9.350	9.683	9.611
2.0	9.678	9.710	9.723	9.845	9.779	9.883	9.562	9.769	9.744
3.0	9.792	9.809	9.831	9.736	9.765	9.804	9.418	9.898	9.757
4.0	9.922	9.814	9.831	9.743	9.806	9.833	9.430	10.130	9.814
5.0	9.760	9.739	9.805	9.741	9.831	9.846	9.437	9.904	9.758
7.5	9.807	9.728	9.841	9.731	9.855	9.858	9.436	9.922	9.772
10.0	9.836	9.735	9.868	9.739	9.857	9.875	9.427	9.910	9.781
12.5	9.840	9.762	9.883	10.117	9.984	10.120	10.008	9.913	9.953

TABLE 29.—VANE INLET AND EXIT STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A (READINGS 8 TO 11; AIRFLOW, 72.16 kg/sec)

CIRCUM. LOCATION, DEG.	INLET PRESSURE N/CM2	INLET COEFFIC	EXIT PRESSURE N/CM2	EXIT COEFFIC
0	9.326	1.018	9.232	1.135
15	9.375	0.956	9.250	1.113
30	9.392	0.934	9.296	1.055
45	9.411	0.911	9.259	1.102
60	9.450	0.861	9.228	1.141
75	******	******	******	******
90	******	******	******	******
105	******	******	******	******
120	9.450	0.861	9.251	1.112
135	9.411	0.911	9.262	1.098
150	9.375	0.956	9.215	1.158
165	9.358	0.978	9.253	1.110
180	9.327	1.017	9.258	1.103
195	9.313	1.033	9.177	1.206
210	9.335	1.006	9.095	1.309
225	9.353	0.983	9.023	1.400
240	9.375	0.955	8.775	1.713
255	9.429	0.887	8.591	1.944
270	9.376	0.955	8.837	1.635
285	9.441	0.873	8.531	2.021
300	9.395	0.931	8.732	1.767
315	9.324	1.020	9.024	1.398
330	9.347	0.990	9.116	1.282
345	9.340	1.000	9.190	1.189

TABLE 30.—VANE INLET AND EXIT STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A (READINGS 12 TO 15; AIRFLOW, 77.15 kg/sec)

CIRCUM. LOCATION, DEG.	INLET PRESSURE N/CM2	INLET COEFFIC	EXIT PRESSURE N/CM2	EXIT COEFFIC
0	9.195	1.026	9.079	1.152
15	9.252	0.963	9.101	1.128
30	9.272	0.941	9.162	1.062
45	9.295	0.916	9.110	1.119
60	9.341	0.866	9.076	1.155
75	******	******	******	******
90	******	******	******	******
105	******	******	******	******
120	9.341	0.865	9.104	1.124
135	9.296	0.915	9.114	1.114
150	9.253	0.962	9.062	1.171
165	9.233	0.984	9.105	1.124
180	9.197	1.024	9.110	1.118
195	9.182	1.040	9.014	1.223
210	9.207	1.012	8.917	1.329
225	9.229	0.988	8.834	1.420
240	9.256	0.958	8.540	1.742
255	9.322	0.887	8.326	1.976
270	9.261	0.953	8.611	1.664
285	9.334	0.873	8.256	2.052
300	9.285	0.927	8.486	1.801
315	9.202	1.018	8.832	1.422
330	9.221	0.997	8.937	1.307
345	9.214	1.004	9.026	1.210

TABLE 31.—VANE INLET AND EXIT STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A
(READINGS 28 TO 31; AIRFLOW, 35.18 kg/sec)

CIRCUM. LOCATION, DEG.	INLET PRESSURE N/CM2	INLET COEFFIC	EXIT PRESSURE N/CM2	EXIT COEFFIC
0	9.972	0.888	9.958	0.968
15	9.981	0.837	9.960	0.956
30	9.984	0.823	9.975	0.869
45	9.988	0.797	9.962	0.946
60	9.996	0.756	9.954	0.987
75	******	******	******	******
90	******	******	******	******
105	******	******	******	******
120	9.996	0.756	9.957	0.972
135	9.988	0.801	9.962	0.944
150	9.981	0.837	9.955	0.983
165	9.979	0.852	9.960	0.956
180	9.972	0.888	9.961	0.948
195	9.969	0.903	9.948	1.020
210	9.973	0.882	9.932	1.109
225	9.977	0.862	9.917	1.195
240	9.978	0.854	9.868	1.463
255	9.987	0.805	9.830	1.672
270	9.975	0.872	9.883	1.383
285	9.990	0.785	9.812	1.777
300	9.982	0.832	9.863	1.490
315	9.969	0.905	9.919	1.184
330	9.971	0.892	9.937	1.083
345	9.974	0.874	9.950	1.012

TABLE 32.—VANE INLET AND EXIT STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A2
(READINGS 35 TO 38; AIRFLOW, 72.09 kg/sec)

CIRCUM. LOCATION, DEG.	INLET PRESSURE N/CM2	INLET COEFFIC	EXIT PRESSURE N/CM2	EXIT COEFFIC
0	9.329	1.015	9.240	1.129
15	9.378	0.954	9.257	1.107
30	9.396	0.932	9.310	1.040
45	9.416	0.906	9.264	1.098
60	9.454	0.857	9.236	1.134
75	******	******	******	******
90	******	******	******	******
105	******	******	******	******
120	9.456	0.855	9.260	1.103
135	9.416	0.905	9.268	1.093
150	9.379	0.952	9.225	1.147
165	9.362	0.974	9.261	1.102
180	9.332	1.012	9.268	1.094
195	9.316	1.033	9.194	1.186
210	9.340	1.002	9.126	1.272
225	9.348	0.991	9.062	1.354
240	9.341	1.001	8.716	1.791
255	9.437	0.880	8.677	1.841
270	9.407	0.918	8.993	1.441
285	9.459	0.852	8.574	1.971
300	9.384	0.946	8.768	1.726
315	9.327	1.019	9.046	1.374
330	9.349	0.991	9.128	1.270
345	9.344	0.997	9.198	1.181

TABLE 33.—VANE INLET AND EXIT STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A3
(READINGS 40 TO 43; AIRFLOW, 72.02 kg/sec)

CIRCUM. LOCATION, DEG.	INLET PRESSURE N/CM2	INLET COEFFIC	EXIT PRESSURE N/CM2	EXIT COEFFIC
0	9.328	1.019	9.237	1.134
15	9.377	0.957	9.255	1.112
30	9.394	0.935	9.307	1.045
45	9.415	0.909	9.264	1.100
60	9.453	0.860	9.236	1.136
75	******	******	******	******
90	******	******	******	******
105	******	******	******	******
120	9.456	0.857	9.264	1.100
135	9.417	0.907	9.268	1.095
150	9.379	0.955	9.225	1.149
165	9.360	0.978	9.262	1.103
180	9.329	1.018	9.267	1.096
195	9.315	1.036	9.198	1.183
210	9.336	1.009	9.128	1.273
225	9.341	1.002	9.060	1.358
240	9.309	1.043	8.736	1.769
255	9.412	0.912	8.692	1.825
270	9.426	0.894	8.952	1.496
285	9.444	0.873	8.653	1.875
300	9.361	0.977	8.734	1.771
315	9.323	1.025	9.058	1.361
330	9.347	0.995	9.129	1.271
345	9.342	1.001	9.200	1.181

TABLE 34.—VANE INLET AND EXIT STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A4
(READINGS 46 TO 49; AIRFLOW, 72.04 kg/sec)

CIRCUM. LOCATION, DEG.	INLET PRESSURE N/CM2	INLET COEFFIC	EXIT PRESSURE N/CM2	EXIT COEFFIC
0	9.327	1.020	9.243	1.126
15	9.376	0.957	9.259	1.105
30	9.395	0.934	9.306	1.046
45	9.414	0.909	9.264	1.099
60	9.454	0.858	9.236	1.134
75	******	******	******	******
90	******	******	******	******
105	******	******	******	******
120	9.457	0.855	9.275	1.085
135	9.418	0.904	9.270	1.091
150	9.379	0.954	9.228	1.144
165	9.361	0.976	9.263	1.100
180	9.326	1.021	9.272	1.089
195	9.313	1.037	9.203	1.177
210	9.325	1.022	9.143	1.253
225	9.322	1.026	9.077	1.336
240	9.250	1.118	8.762	1.734
255	9.391	0.938	8.735	1.768
270	9.447	0.867	8.885	1.579
285	9.425	0.895	8.717	1.792
300	9.306	1.046	8.761	1.736
315	9.305	1.048	9.069	1.346
330	9.339	1.005	9.136	1.261
345	9.338	1.005	9.204	1.175

TABLE 35.—VANE INLET AND EXIT STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A7
(READINGS 59 TO 62; AIRFLOW, 72.00 kg/sec)

CIRCUM. LOCATION, DEG.	INLET PRESSURE N/CM2	INLET COEFFIC	EXIT PRESSURE N/CM2	EXIT COEFFIC
0	9.354	0.985	9.254	1.113
15	9.398	0.930	9.271	1.091
30	9.424	0.897	9.312	1.039
45	9.466	0.843	9.296	1.059
60	9.487	0.817	9.330	1.016
75	******	******	******	******
90	******	******	******	******
105	******	******	******	******
120	9.471	0.837	9.289	1.068
135	9.460	0.852	9.298	1.057
150	9.410	0.914	9.249	1.118
165	9.379	0.953	9.274	1.086
180	9.349	0.992	9.280	1.079
195	9.341	1.002	9.212	1.165
210	9.366	0.970	9.164	1.225
225	9.369	0.966	9.093	1.316
240	9.423	0.897	8.800	1.687
255	9.540	0.750	9.041	1.382
270	9.537	0.754	9.280	1.079
285	9.556	0.730	9.089	1.321
300	9.433	0.885	8.805	1.681
315	9.336	1.008	9.081	1.332
330	9.366	0.971	9.161	1.230
345	9.368	0.967	9.215	1.161

TABLE 36.—VANE INLET AND EXIT STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A8
(READINGS 65 TO 68; AIRFLOW, 72.17 kg/sec)

CIRCUM. LOCATION, DEG.	INLET PRESSURE N/CM2	INLET COEFFIC	EXIT PRESSURE N/CM2	EXIT COEFFIC
0	9.342	0.996	9.239	1.127
15	9.387	0.940	9.259	1.101
30	9.402	0.921	9.293	1.058
45	9.423	0.894	9.272	1.085
60	9.535	0.753	9.356	0.979
75	******	******	******	******
90	******	******	******	******
105	******	******	******	******
120	9.509	0.786	9.312	1.034
135	9.426	0.891	9.282	1.072
150	9.386	0.941	9.237	1.129
165	9.368	0.964	9.264	1.095
180	9.336	1.004	9.269	1.089
195	9.326	1.017	9.194	1.184
210	9.353	0.983	9.120	1.277
225	9.366	0.967	9.059	1.354
240	9.378	0.952	8.732	1.766
255	9.472	0.833	8.787	1.696
270	9.451	0.860	9.143	1.248
285	9.479	0.823	8.757	1.734
300	9.386	0.941	8.702	1.804
315	9.333	1.008	9.050	1.365
330	9.353	0.983	9.127	1.268
345	9.356	0.979	9.196	1.180

TABLE 37.—VANE INLET AND EXIT STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A10
(READINGS 458 TO 461; AIRFLOW, 72.24 kg/sec)

CIRCUM. LOCATION, DEG.	INLET PRESSURE N/CM2	INLET COEFFIC	EXIT PRESSURE N/CM2	EXIT COEFFIC
0	9.426	0.887	9.233	1.131
15	9.368	0.960	9.293	1.055
30	9.374	0.954	9.302	1.044
45	9.359	0.972	9.262	1.094
60	9.419	0.897	9.266	1.089
75	******	******	******	******
90	******	******	******	******
105	******	******	******	******
120	9.408	0.910	9.258	1.099
135	9.344	0.991	9.262	1.094
150	9.346	0.989	9.233	1.131
165	9.362	0.968	9.286	1.064
180	9.387	0.937	9.317	1.026
195	9.427	0.887	9.311	1.033
210	9.502	0.793	9.337	1.000
225	9.548	0.734	9.337	1.000
240	9.576	0.699	9.353	0.980
255	9.611	0.655	9.375	0.952
270	9.585	0.688	9.403	0.917
285	9.613	0.653	9.399	0.922
300	9.584	0.689	9.341	0.995
315	9.528	0.760	9.332	1.007
330	9.487	0.811	9.330	1.009
345	9.469	0.835	9.328	1.011

TABLE 38.—VANE INLET AND EXIT STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A11
(READINGS 696 TO 699; AIRFLOW, 72.87 kg/sec)

CIRCUM. LOCATION, DEG.	INLET PRESSURE N/CM2	INLET COEFFIC	EXIT PRESSURE N/CM2	EXIT COEFFIC
0	9.407	0.897	9.302	1.027
15	9.378	0.933	9.288	1.044
30	9.385	0.924	9.284	1.050
45	9.370	0.942	9.266	1.071
60	9.402	0.903	9.245	1.098
75	******	******	******	******
90	******	******	******	******
105	******	******	******	******
120	9.391	0.917	9.247	1.095
135	9.355	0.962	9.280	1.055
150	9.363	0.952	9.247	1.095
165	9.359	0.956	9.296	1.035
180	9.391	0.917	9.328	0.995
195	9.420	0.881	9.326	0.998
210	9.491	0.793	9.337	0.983
225	9.544	0.728	9.334	0.987
240	9.574	0.690	9.352	0.966
255	9.583	0.680	9.385	0.924
270	9.507	0.774	9.415	0.887
285	9.591	0.670	9.393	0.914
300	9.586	0.676	9.357	0.959
315	9.532	0.743	9.339	0.981
330	9.492	0.792	9.336	0.986
345	9.457	0.835	9.320	1.004

TABLE 39.—VANE INLET AND EXIT STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE B
(READINGS 947 TO 950; AIRFLOW, 35.50 kg/sec)

CIRCUM. LOCATION, DEG.	INLET PRESSURE N/CM2	INLET COEFFIC	EXIT PRESSURE N/CM2	EXIT COEFFIC
0	9.989	0.778	9.965	0.909
15	9.983	0.814	9.961	0.930
30	9.979	0.836	9.964	0.918
45	9.977	0.844	9.958	0.950
60	9.976	0.848	9.955	0.964
75	******	******	******	******
90	******	******	******	******
105	******	******	******	******
120	9.975	0.854	9.955	0.967
135	9.975	0.855	9.959	0.941
150	9.976	0.848	9.957	0.956
165	9.981	0.825	9.962	0.924
180	9.988	0.785	10.065	0.364
195	9.994	0.751	9.970	0.884
210	10.003	0.702	9.973	0.865
225	10.018	0.624	9.975	0.857
240	10.025	0.585	9.977	0.848
255	10.031	0.549	9.978	0.841
270	10.029	0.562	9.975	0.854
285	10.036	0.523	9.977	0.843
300	10.030	0.555	9.976	0.852
315	10.016	0.634	9.975	0.856
330	10.007	0.680	9.972	0.870
345	10.001	0.712	9.969	0.889

TABLE 40.—VANE INLET AND EXIT STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE B
(READINGS 951 TO 954; AIRFLOW, 56.52 kg/sec)

CIRCUM. LOCATION, DEG.	INLET PRESSURE N/CM2	INLET COEFFIC	EXIT PRESSURE N/CM2	EXIT COEFFIC
0	9.754	0.797	9.684	0.945
15	9.733	0.841	9.674	0.966
30	9.721	0.868	9.676	0.962
45	9.713	0.883	9.658	1.000
60	9.712	0.886	9.653	1.010
75	******	******	******	******
90	******	******	******	******
105	******	******	******	******
120	9.709	0.893	9.651	1.015
135	9.711	0.889	9.665	0.986
150	9.714	0.881	9.657	1.003
165	9.727	0.855	9.676	0.961
180	9.747	0.811	10.086	0.098
195	9.768	0.769	9.698	0.916
210	9.793	0.716	9.709	0.892
225	9.832	0.633	9.715	0.879
240	9.854	0.586	9.723	0.863
255	9.872	0.548	9.730	0.847
270	9.864	0.566	9.725	0.859
285	9.884	0.523	9.726	0.856
300	9.864	0.565	9.720	0.869
315	9.827	0.644	9.716	0.878
330	9.803	0.694	9.707	0.895
345	9.787	0.727	9.697	0.916

TABLE 41.—VANE INLET AND EXIT STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE B
(READINGS 955 TO 958; AIRFLOW, 68.91 kg/sec)

CIRCUM. LOCATION, DEG.	INLET PRESSURE N/CM2	INLET COEFFIC	EXIT PRESSURE N/CM2	EXIT COEFFIC
0	9.535	0.832	9.419	0.995
15	9.502	0.878	9.404	1.015
30	9.482	0.907	9.406	1.013
45	9.470	0.923	9.383	1.045
60	9.485	0.902	9.371	1.061
75	******	******	******	******
90	******	******	******	******
105	******	******	******	******
120	9.462	0.935	9.366	1.069
135	9.468	0.926	9.388	1.037
150	9.473	0.919	9.374	1.057
165	9.492	0.893	9.409	1.008
180	9.529	0.841	9.432	0.976
195	9.556	0.804	9.440	0.965
210	9.597	0.747	9.457	0.941
225	9.662	0.656	9.468	0.925
240	9.698	0.605	9.484	0.904
255	9.727	0.564	9.501	0.881
270	9.718	0.578	9.492	0.893
285	9.744	0.541	9.491	0.894
300	9.718	0.578	9.480	0.910
315	9.653	0.668	9.469	0.925
330	9.615	0.721	9.453	0.947
345	9.588	0.759	9.440	0.965

TABLE 42.—VANE INLET AND EXIT STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE B
(READINGS 959 TO 962; AIRFLOW, 73.42 kg/sec)

CIRCUM. LOCATION, DEG.	INLET PRESSURE N/CM2	INLET COEFFIC	EXIT PRESSURE N/CM2	EXIT COEFFIC
0	9.426	0.859	9.286	1.031
15	9.386	0.909	9.268	1.052
30	9.364	0.936	9.269	1.051
45	9.351	0.951	9.243	1.083
60	9.379	0.917	9.236	1.092
75	******	******	******	******
90	******	******	******	******
105	******	******	******	******
120	9.341	0.964	9.223	1.107
135	9.348	0.955	9.250	1.074
150	9.354	0.948	9.232	1.096
165	9.376	0.921	9.274	1.045
180	9.420	0.868	9.302	1.011
195	9.450	0.830	9.310	1.002
210	9.500	0.770	9.330	0.976
225	9.578	0.675	9.344	0.960
240	9.623	0.620	9.364	0.936
255	9.658	0.578	9.385	0.910
270	9.646	0.593	9.376	0.921
285	9.677	0.554	9.373	0.924
300	9.645	0.594	9.358	0.942
315	9.567	0.688	9.344	0.960
330	9.521	0.744	9.328	0.979
345	9.490	0.782	9.311	1.000

TABLE 43.—VANE INLET AND EXIT STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE B
(READINGS 963 TO 966; AIRFLOW, 75.56 kg/sec)

CIRCUM. LOCATION, DEG.	INLET PRESSURE N/CM2	INLET COEFFIC	EXIT PRESSURE N/CM2	EXIT COEFFIC
0	9.392	0.849	9.240	1.023
15	9.351	0.896	9.224	1.042
30	9.326	0.925	9.226	1.039
45	9.312	0.940	9.197	1.072
60	9.352	0.895	9.195	1.075
75	******	******	******	******
90	******	******	******	******
105	******	******	******	******
120	9.301	0.953	9.178	1.094
135	9.310	0.943	9.206	1.062
150	9.314	0.938	9.187	1.084
165	9.338	0.911	9.231	1.034
180	9.384	0.858	9.260	1.000
195	9.417	0.820	9.267	0.992
210	9.469	0.761	9.289	0.967
225	9.552	0.665	9.303	0.951
240	9.599	0.611	9.324	0.927
255	9.635	0.570	9.348	0.899
270	9.622	0.585	9.335	0.914
285	9.656	0.546	9.336	0.914
300	9.622	0.585	9.319	0.932
315	9.540	0.679	9.304	0.949
330	9.490	0.736	9.286	0.971
345	9.458	0.773	9.269	0.990

TABLE 44.—VANE INLET AND EXIT STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE B
(READINGS 967 TO 970; AIRFLOW, 78.89 kg/sec)

CIRCUM. LOCATION, DEG.	INLET PRESSURE N/CM2	INLET COEFFIC	EXIT PRESSURE N/CM2	EXIT COEFFIC
0	9.308	0.861	9.143	1.034
15	9.267	0.905	9.123	1.055
30	9.238	0.935	9.125	1.053
45	9.225	0.948	9.094	1.085
60	9.277	0.894	9.093	1.087
75	******	******	******	******
90	******	******	******	******
105	******	******	******	******
120	9.215	0.958	9.073	1.107
135	9.223	0.951	9.105	1.074
150	9.228	0.946	9.081	1.099
165	9.253	0.919	9.132	1.046
180	9.301	0.869	9.163	1.014
195	9.340	0.829	9.170	1.006
210	9.397	0.769	9.194	0.981
225	9.489	0.672	9.209	0.965
240	9.543	0.616	9.233	0.940
255	9.582	0.575	9.259	0.912
270	9.568	0.590	9.250	0.923
285	9.606	0.551	9.246	0.926
300	9.568	0.590	9.226	0.947
315	9.477	0.685	9.211	0.963
330	9.422	0.743	9.191	0.984
345	9.386	0.780	9.173	1.002

TABLE 45.—VANE INLET AND EXIT STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE B
(READINGS 971 TO 974; AIRFLOW, 81.77 kg/sec)

CIRCUM. LOCATION, DEG.	INLET PRESSURE N/CM2	INLET COEFFIC	EXIT PRESSURE N/CM2	EXIT COEFFIC
0	9.270	0.837	9.091	1.010
15	9.223	0.882	9.069	1.031
30	9.193	0.911	9.070	1.030
45	9.180	0.923	9.040	1.059
60	9.239	0.867	9.045	1.054
75	******	******	******	******
90	******	******	******	******
105	******	******	******	******
120	9.171	0.933	9.018	1.081
135	9.175	0.929	9.051	1.049
150	9.182	0.922	9.026	1.073
165	9.208	0.897	9.079	1.021
180	9.262	0.844	9.112	0.990
195	9.299	0.808	9.120	0.982
210	9.360	0.749	9.143	0.959
225	9.457	0.655	9.159	0.943
240	9.513	0.600	9.183	0.921
255	9.556	0.559	9.215	0.890
270	9.541	0.574	9.205	0.900
285	9.581	0.535	9.197	0.907
300	9.539	0.575	9.177	0.926
315	9.444	0.668	9.160	0.943
330	9.386	0.724	9.140	0.963
345	9.348	0.761	9.122	0.980

TABLE 46.—VANE INLET AND EXIT STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A10 WITH SCOOP
(READINGS 12A TO 15A; AIRFLOW, 73.10 kg/sec)

CIRCUM. LOCATION, DEG.	INLET PRESSURE N/CM2	INLET COEFFIC	EXIT PRESSURE N/CM2	EXIT COEFFIC
0	9.097	0.984	8.929	1.144
15	9.024	1.054	8.993	1.083
30	9.006	1.071	9.066	1.014
45	9.027	1.051	9.075	1.005
60	9.104	0.977	9.084	0.997
75	******	******	******	******
90	******	******	******	******
105	******	******	******	******
120	9.120	0.962	9.095	0.986
135	9.048	1.031	9.065	1.014
150	9.019	1.058	9.332	0.760
165	9.029	1.049	8.988	1.088
180	9.123	0.959	9.044	1.035
195	9.270	0.820	8.879	1.192
210	9.463	0.636	8.906	1.166
225	9.601	0.505	8.984	1.092
240	9.672	0.438	9.205	0.881
255	******	******	******	******
270	******	******	******	******
285	******	******	******	******
300	9.683	0.428	9.183	0.902
315	9.594	0.512	8.997	1.080
330	9.475	0.625	8.935	1.138
345	9.277	0.813	8.903	1.168

TABLE 47.—VANE INLET AND EXIT STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A10 WITH SCOOP (READINGS 16A TO 19A; AIRFLOW, 74.88 kg/sec)

CIRCUM. LOCATION, DEG.	INLET PRESSURE N/CM2	INLET COEFFIC	EXIT PRESSURE N/CM2	EXIT COEFFIC
0	9.045	0.982	8.866	1.144
15	8.969	1.051	8.935	1.081
30	8.950	1.068	9.009	1.014
45	8.973	1.048	9.022	1.003
60	9.054	0.974	9.032	0.994
75	******	******	******	******
90	******	******	******	******
105	******	******	******	******
120	9.072	0.958	9.043	0.984
135	8.995	1.027	9.012	1.002
150	8.966	1.054	8.938	1.008
165	8.974	1.046	8.929	1.087
180	9.073	0.957	8.987	1.034
195	9.227	0.818	8.812	1.192
210	9.429	0.635	8.839	1.169
225	9.575	0.503	8.923	1.093
240	9.650	0.436	9.158	0.880
255	******	******	******	******
270	******	******	******	******
285	******	******	******	******
300	9.664	0.423	9.133	0.903
315	9.568	0.510	8.936	1.080
330	9.443	0.623	8.872	1.139
345	9.235	0.810	8.838	1.169

TABLE 48.—VANE INLET AND EXIT STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A10 WITH SCOOP (READINGS 20A TO 24A; AIRFLOW, 78.32 kg/sec)

CIRCUM. LOCATION, DEG.	INLET PRESSURE N/CM2	INLET COEFFIC	EXIT PRESSURE N/CM2	EXIT COEFFIC
0	8.923	0.991	8.712	1.163
15	8.840	1.059	8.795	1.095
30	8.819	1.076	8.880	1.026
45	8.844	1.055	8.895	1.014
60	8.936	0.980	8.910	1.001
75	******	******	******	******
90	******	******	******	******
105	******	******	******	******
120	8.955	0.964	8.918	0.994
135	8.870	1.034	8.884	1.022
150	8.834	1.063	8.800	1.031
165	8.846	1.054	8.789	1.160
180	8.953	0.966	8.849	1.051
195	9.126	0.824	8.651	1.213
210	9.352	0.639	8.680	1.190
225	9.515	0.505	8.774	1.112
240	9.597	0.438	9.042	0.893
255	******	******	******	******
270	******	******	******	******
285	******	******	******	******
300	9.611	0.427	9.013	0.916
315	9.506	0.513	8.788	1.101
330	9.367	0.627	8.716	1.160
345	9.136	0.816	8.679	1.190

TABLE 49.—VANE INLET AND EXIT STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A10 WITH SCOOP (READINGS 25A TO 28A; AIRFLOW, 35.46 kg/sec)

CIRCUM. LOCATION, DEG.	INLET PRESSURE N/CM2	INLET COEFFIC	EXIT PRESSURE N/CM2	EXIT COEFFIC
0	9.931	0.860	9.902	0.980
15	9.915	0.928	9.912	0.939
30	9.911	0.945	9.925	0.883
45	9.914	0.932	9.924	0.888
60	9.928	0.871	9.927	0.876
75	******	******	******	******
90	******	******	******	******
105	******	******	******	******
120	9.931	0.860	9.929	0.867
135	9.917	0.918	9.922	0.898
150	9.913	0.935	9.883	1.062
165	9.916	0.923	9.910	0.948
180	9.935	0.842	9.936	0.838
195	9.963	0.722	9.898	1.001
210	9.999	0.569	9.904	0.972
225	10.025	0.457	9.917	0.916
240	10.038	0.401	9.955	0.757
255	******	******	******	******
270	******	******	******	******
285	******	******	******	******
300	10.042	0.386	9.952	0.768
315	10.023	0.464	9.917	0.915
330	10.001	0.560	9.908	0.957
345	9.964	0.719	9.901	0.987

TABLE 50.—VANE INLET AND EXIT STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A10 WITH SCOOP (READINGS 29A TO 32A; AIRFLOW, 56.42 kg/sec)

CIRCUM. LOCATION, DEG.	INLET PRESSURE N/CM2	INLET COEFFIC	EXIT PRESSURE N/CM2	EXIT COEFFIC
0	9.588	0.897	9.510	1.026
15	9.547	0.965	9.539	0.980
30	9.537	0.982	9.573	0.923
45	9.547	0.966	9.572	0.925
60	9.586	0.902	9.581	0.909
75	******	******	******	******
90	******	******	******	******
105	******	******	******	******
120	9.594	0.888	9.587	0.900
135	9.557	0.950	9.571	0.927
150	9.544	0.970	9.515	1.019
165	9.550	0.960	9.535	0.985
180	9.601	0.877	9.579	0.914
195	9.677	0.751	9.491	1.058
210	9.777	0.586	9.507	1.031
225	9.849	0.468	9.546	0.968
240	9.887	0.405	9.652	0.792
255	******	******	******	******
270	******	******	******	******
285	******	******	******	******
300	9.894	0.393	9.642	0.808
315	9.843	0.478	9.551	0.960
330	9.783	0.577	9.520	1.010
345	9.681	0.745	9.502	1.039

TABLE 51.—VANE INLET AND EXIT STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A10 WITH SCOOP (READINGS 33A TO 36A; AIRFLOW, 68.73 kg/sec)

CIRCUM. LOCATION, DEG.	INLET PRESSURE N/CM2	INLET COEFFIC	EXIT PRESSURE N/CM2	EXIT COEFFIC
0	9.262	0.947	9.128	1.094
15	9.199	1.016	9.178	1.039
30	9.184	1.032	9.233	0.979
45	9.202	1.013	9.242	0.970
60	9.264	0.946	9.252	0.958
75	******	******	******	******
90	******	******	******	******
105	******	******	******	******
120	9.279	0.929	9.260	0.950
135	9.217	0.996	9.235	0.977
150	9.194	1.021	9.171	1.046
165	9.204	1.011	9.174	1.043
180	9.282	0.926	9.234	0.978
195	9.406	0.790	9.091	1.134
210	9.567	0.616	9.114	1.109
225	9.682	0.490	9.178	1.039
240	9.743	0.424	9.355	0.847
255	******	******	******	******
270	******	******	******	******
285	******	******	******	******
300	9.754	0.411	9.340	0.863
315	9.677	0.495	9.188	1.028
330	9.577	0.604	9.136	1.085
345	9.412	0.784	9.109	1.114

TABLE 52.—VANE INLET AND EXIT STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A10 WITH SCOOP (READINGS 37A TO 40A; AIRFLOW, 81.33 kg/sec)

CIRCUM. LOCATION, DEG.	INLET PRESSURE N/CM2	INLET COEFFIC	EXIT PRESSURE N/CM2	EXIT COEFFIC
0	8.864	0.962	8.640	1.132
15	8.776	1.029	8.726	1.067
30	8.755	1.045	8.811	1.002
45	8.782	1.024	8.831	0.987
60	8.879	0.951	8.853	0.971
75	******	******	******	******
90	******	******	******	******
105	******	******	******	******
120	8.895	0.938	8.857	0.967
135	8.809	1.004	8.821	0.995
150	8.771	1.033	8.788	1.020
165	8.783	1.023	8.721	1.070
180	8.895	0.938	8.790	1.018
195	9.078	0.800	8.571	1.184
210	9.315	0.620	8.601	1.161
225	9.486	0.490	8.701	1.086
240	9.571	0.425	8.987	0.869
255	******	******	******	******
270	******	******	******	******
285	******	******	******	******
300	9.588	0.413	8.956	0.892
315	9.477	0.497	8.714	1.076
330	9.330	0.608	8.638	1.133
345	9.086	0.794	8.601	1.161

TABLE 53.—AXIAL WALL STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A (READINGS 8 TO 11; AIRFLOW, 72.16 kg/sec)

AXIAL STATION	PRESSURE, N/CM2 CIRCUM. LOCATION, DEG				COEFFICIENT CIRCUM. LOCATION, DEG			
	0	90	180	270	0	90	180	270
1		9.422				0.896		
2		9.415				0.906		
3		9.411				0.910		
4		9.414				0.906		
5		9.413				0.908		
6		9.446				0.866		
7		9.420				0.899		
8		9.411				0.910		
9		9.413				0.907		
10		9.406				0.916		
11	9.371	9.485	9.383	9.377	0.960	0.817	0.945	0.953
12	******	******	******	******	*****	*****	*****	*****
13	9.386		9.366	9.364	0.942		0.967	0.969
14	9.371		9.356	9.359	0.960		0.980	0.976
15	9.355		9.344	9.350	0.981		0.995	0.987
16	9.329		9.313	9.331	1.013		1.034	1.011
17				9.321				1.024
18				9.309				1.039
19				9.300				1.051
20				9.294				1.058
21				9.309				1.039
22				******				*****
23				******				*****
24				8.847				1.622
25				9.101				1.301
26				9.154				1.234
27				9.178				1.204
28				9.199				1.178
29	9.228		9.200	9.217	1.141		1.176	1.155
30	9.233		9.220	9.239	1.134		1.151	1.127
31	9.243		9.226	9.238	1.122		1.143	1.129
32	9.244		9.231	9.253	1.120		1.137	1.110
33	******	******	******	******	*****	*****	*****	*****
34	9.266	9.255	9.259	9.255	1.094	1.107	1.102	1.107
35	9.256	9.261	9.251	9.258	1.106	1.099	1.113	1.103
36		9.260				1.100		
37		9.261				1.100		
38		9.259				1.101		
39	9.257	9.262	9.255	9.260	1.105	1.098	1.106	1.101
40		9.258				1.103		
41		9.261				1.099		
42		9.259				1.103		
43	9.255	9.263	9.252	9.259	1.108	1.097	1.111	1.102
44		9.263				1.097		
45		9.257				1.104		
46		9.258				1.103		
47	10.040	9.258	9.255	9.256	0.116	1.104	1.107	1.105
48		9.262				1.099		
49	9.247	9.257	9.258	9.239	1.118	1.104	1.103	1.127

TABLE 54.—AXIAL WALL STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A (READINGS 12 TO 15; AIRFLOW, 77.15 kg/sec)

AXIAL STATION	PRESSURE, N/CM2 CIRCUM. LOCATION, DEG				COEFFICIENT CIRCUM. LOCATION, DEG			
	0	90	180	270	0	90	180	270
1		9.306				0.904		
2		9.300				0.910		
3		9.296				0.915		
4		9.299				0.911		
5		9.297				0.913		
6		9.337				0.870		
7		9.306				0.904		
8		9.296				0.915		
9		9.298				0.913		
10		9.290				0.922		
11	9.249	9.382	9.264	9.255	0.966	0.820	0.950	0.959
12	******	******	******	******	*****	*****	*****	*****
13	9.266		9.242	9.242	0.947		0.973	0.974
14	9.249		9.231	9.232	0.966		0.986	0.985
15	9.230		9.216	9.227	0.987		1.002	0.990
16	9.199		9.179	9.208	1.021		1.043	1.011
17				9.186				1.036
18				9.175				1.047
19				9.167				1.056
20				9.161				1.062
21				9.181				1.041
22				******				*****
23				******				*****
24				8.627				1.647
25				8.923				1.323
26				8.985				1.255
27				9.013				1.224
28				9.037				1.198
29	9.073		9.039	9.061	1.159		1.195	1.172
30	9.080		9.065	9.088	1.151		1.167	1.142
31	9.091		9.072	9.086	1.139		1.160	1.144
32	9.093		9.078	9.104	1.136		1.153	1.125
33	******	******	******	******	*****	*****	*****	*****
34	9.119	9.108	9.112	9.108	1.108	1.121	1.116	1.121
35	9.108	9.115	9.102	9.111	1.120	1.113	1.127	1.117
36		9.114				1.114		
37		9.115				1.113		
38		9.113				1.115		
39	9.110	9.115	9.108	9.112	1.118	1.112	1.120	1.116
40		9.112				1.116		
41		9.116				1.112		
42		9.113				1.115		
43	9.108	9.118	9.105	9.114	1.121	1.110	1.124	1.114
44		9.117				1.111		
45		9.111				1.118		
46		9.112				1.117		
47	9.973	9.110	9.109	9.110	0.174	1.118	1.119	1.119
48		9.115				1.113		
49	9.098	9.108	9.112	9.088	1.131	1.120	1.117	1.142

TABLE 55.—AXIAL WALL STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A (READINGS 28 TO 31; AIRFLOW, 35.18 kg/sec)

AXIAL STATION	PRESSURE, N/CM2 CIRCUM. LOCATION, DEG				COEFFICIENT CIRCUM. LOCATION, DEG			
	0	90	180	270	0	90	180	270
1		9.989				0.793		
2		9.989				0.796		
3		9.988				0.800		
4		9.988				0.798		
5		9.985				0.815		
6		9.995				0.763		
7		9.989				0.792		
8		9.988				0.799		
9		9.989				0.796		
10		9.987				0.805		
11	9.980	10.003	9.983	9.981	0.842	0.715	0.827	0.837
12	******	******	******	******	*****	*****	*****	*****
13	9.983		9.980	9.976	0.829		0.846	0.868
14	9.980		9.978	9.971	0.841		0.856	0.891
15	9.978		9.975	9.976	0.857		0.869	0.864
16	9.973		9.970	9.973	0.880		0.897	0.880
17				9.969				0.904
18				9.967				0.918
19				9.964				0.930
20				9.963				0.937
21				9.964				0.931
22				******				*****
23				******				*****
24				9.891				1.335
25				9.935				1.093
26				9.943				1.047
27				9.948				1.023
28				9.950				1.007
29	9.956		9.953	9.954	0.975		0.995	0.986
30	9.954		9.956	9.958	0.990		0.979	0.966
31	9.958		9.956	9.958	0.967		0.979	0.967
32	9.958		9.954	9.960	0.963		0.988	0.952
33	******	******	******	******	*****	*****	*****	*****
34	9.963	9.961	9.961	9.960	0.939	0.948	0.948	0.953
35	9.959	9.961	9.959	9.959	0.961	0.950	0.960	0.958
36		9.960				0.954		
37		9.959				0.959		
38		9.959				0.959		
39	9.959	9.960	9.958	9.960	0.958	0.955	0.963	0.952
40		9.961				0.949		
41		9.957				0.970		
42		9.959				0.960		
43	9.959	9.961	9.958	9.960	0.959	0.951	0.965	0.957
44		9.960				0.955		
45		9.959				0.962		
46		9.960				0.953		
47	10.042	9.958	9.958	9.959	0.498	0.964	0.966	0.957
48		9.960				0.957		
49	9.958	9.960	9.959	9.955	0.968	0.955	0.958	0.980

TABLE 56.—AXIAL WALL STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A2 (READINGS 35 TO 38; AIRFLOW, 72.09 kg/sec)

AXIAL STATION	PRESSURE, N/CM2 CIRCUM. LOCATION, DEG				COEFFICIENT CIRCUM. LOCATION, DEG			
	0	90	180	270	0	90	180	270
1		9.424				0.895		
2		9.418				0.903		
3		9.414				0.908		
4		9.417				0.904		
5		9.415				0.907		
6		9.450				0.863		
7		9.423				0.897		
8		9.415				0.908		
9		9.417				0.905		
10		9.410				0.914		
11	9.375	9.486	9.388	9.380	0.957	0.817	0.942	0.951
12	******	******	******	******	*****	*****	*****	*****
13	9.389		9.369	9.367	0.940		0.966	0.968
14	9.375		9.359	9.357	0.958		0.978	0.980
15	9.358		9.347	9.352	0.980		0.993	0.987
16	9.331		9.316	9.335	1.014		1.032	1.009
17				9.313				1.036
18				9.299				1.054
19				9.284				1.073
20				9.265				1.097
21				9.279				1.080
22				******				*****
23				******				*****
24				9.075				1.337
25				9.146				1.248
26				9.162				1.228
27				9.184				1.199
28				9.205				1.173
29	9.233		9.210	9.224	1.137		1.167	1.148
30	9.239		9.228	9.250	1.130		1.144	1.116
31	9.247		9.233	9.241	1.119		1.137	1.127
32	9.250		9.236	9.258	1.116		1.133	1.105
33	******	******	******	******	*****	*****	*****	*****
34	9.272	9.261	9.268	9.259	1.088	1.101	1.093	1.104
35	9.260	9.266	9.253	9.262	1.103	1.095	1.111	1.101
36		9.265				1.097		
37		9.266				1.095		
38		9.264				1.099		
39	9.261	9.266	9.258	9.264	1.101	1.095	1.105	1.098
40		9.264				1.098		
41		9.266				1.095		
42		9.264				1.098		
43	9.260	9.268	9.257	9.264	1.103	1.093	1.107	1.098
44		9.267				1.094		
45		9.262				1.100		
46		9.263				1.099		
47	9.969	9.262	9.259	9.262	0.207	1.100	1.104	1.101
48		9.266				1.096		
49	9.251	9.261	9.263	9.241	1.114	1.102	1.099	1.127

TABLE 57.—AXIAL WALL STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A3 (READINGS 40 TO 43; AIRFLOW, 72.02 kg/sec)

AXIAL STATION	PRESSURE, N/CM2 CIRCUM. LOCATION, DEG				COEFFICIENT CIRCUM. LOCATION, DEG			
	0	90	180	270	0	90	180	270
1		9.422				0.900		
2		9.416				0.908		
3		9.412				0.912		
4		9.415				0.908		
5		9.414				0.909		
6		9.450				0.865		
7		9.422				0.900		
8		9.413				0.911		
9		9.415				0.909		
10		9.408				0.918		
11	9.375	9.486	9.387	9.379	0.960	0.819	0.945	0.955
12	******	******	******	******	*****	*****	*****	*****
13	9.387		9.368	9.365	0.944		0.969	0.972
14	9.374		9.358	9.355	0.961		0.981	0.984
15	9.356		9.346	9.349	0.983		0.996	0.992
16	9.331		9.315	9.332	1.015		1.035	1.014
17				9.309				1.043
18				9.293				1.063
19				9.276				1.084
20				9.254				1.113
21				9.266				1.097
22				******				*****
23				******				*****
24				9.087				1.324
25				9.150				1.245
26				9.166				1.224
27				9.186				1.199
28				9.206				1.173
29	9.233		9.212	9.225	1.140		1.166	1.150
30	9.239		9.230	9.249	1.131		1.143	1.119
31	9.248		9.235	9.242	1.121		1.137	1.128
32	9.248		9.238	9.258	1.121		1.133	1.107
33	******	******	******	******	*****	*****	*****	*****
34	9.271	9.257	9.267	9.259	1.091	1.109	1.097	1.106
35	9.260	9.265	9.253	9.261	1.105	1.099	1.114	1.104
36		9.264				1.100		
37		9.265				1.099		
38		9.264				1.100		
39	9.261	9.266	9.255	9.263	1.104	1.098	1.111	1.102
40		9.264				1.101		
41		9.266				1.098		
42		9.264				1.101		
43	9.259	9.267	9.256	9.264	1.107	1.096	1.110	1.101
44		9.264				1.101		
45		9.259				1.106		
46		9.262				1.103		
47	9.999	9.262	9.258	9.260	0.168	1.103	1.107	1.105
48		9.266				1.097		
49	9.250	9.261	9.259	9.239	1.117	1.104	1.107	1.131

TABLE 58.—AXIAL WALL STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A4 (READINGS 46 TO 49; AIRFLOW, 72.04 kg/sec)

AXIAL STATION	PRESSURE, N/CM2 CIRCUM. LOCATION, DEG				COEFFICIENT CIRCUM. LOCATION, DEG			
	0	90	180	270	0	90	180	270
1		9.423				0.898		
2		9.416				0.907		
3		9.412				0.912		
4		9.415				0.908		
5		9.414				0.909		
6		9.448				0.866		
7		9.422				0.899		
8		9.413				0.910		
9		9.414				0.909		
10		9.408				0.917		
11	9.372	9.488	9.386	9.376	0.962	0.815	0.945	0.958
12	******	******	******	******	*****	*****	*****	*****
13	9.386		9.367	9.363	0.944		0.969	0.973
14	9.372		9.357	9.353	0.963		0.981	0.986
15	9.355		9.346	9.346	0.984		0.996	0.996
16	9.330		9.314	9.328	1.015		1.036	1.019
17				9.303				1.050
18				9.284				1.073
19				9.263				1.100
20				9.239				1.132
21				9.258				1.106
22				******				*****
23				******				*****
24				9.114				1.290
25				9.156				1.237
26				9.170				1.219
27				9.190				1.193
28				9.209				1.169
29	9.235		9.214	9.226	1.136		1.163	1.148
30	9.240		9.231	9.249	1.129		1.141	1.118
31	9.248		9.236	9.243	1.119		1.135	1.126
32	9.249		9.238	9.258	1.118		1.132	1.107
33	******	******	******	******	*****	*****	*****	*****
34	9.272	9.260	9.263	9.258	1.089	1.104	1.100	1.106
35	9.260	9.267	9.254	9.261	1.104	1.096	1.111	1.103
36		9.265				1.098		
37		9.266				1.097		
38		9.264				1.100		
39	9.261	9.266	9.260	9.263	1.103	1.097	1.105	1.101
40		9.264				1.099		
41		9.265				1.098		
42		9.264				1.099		
43	9.260	9.267	9.257	9.263	1.105	1.096	1.109	1.100
44		9.263				1.100		
45		9.262				1.102		
46		9.262				1.102		
47	10.034	9.261	9.259	9.260	0.125	1.103	1.106	1.104
48		9.266				1.097		
49	9.251	9.260	9.262	9.239	1.116	1.104	1.101	1.131

TABLE 59.—AXIAL WALL STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A7 (READINGS 59 TO 62; AIRFLOW, 72.00 kg/sec)

AXIAL STATION	PRESSURE, N/CM2 CIRCUM. LOCATION, DEG 0	90	180	270	COEFFICIENT CIRCUM. LOCATION, DEG 0	90	180	270
1		9.433				0.885		
2		9.425				0.895		
3		9.422				0.899		
4		9.425				0.896		
5		9.423				0.898		
6		9.420				0.902		
7		9.421				0.901		
8		9.418				0.904		
9		9.422				0.899		
10		9.416				0.906		
11	9.394	9.381	9.399	9.390	0.934	0.952	0.928	0.939
12	******	******	******	******	*****	*****	*****	*****
13	9.408		9.388	9.383	0.917		0.942	0.948
14	9.396		9.380	9.375	0.932		0.953	0.958
15	9.380		9.367	9.385	0.953		0.969	0.946
16	9.357		9.335	9.355	0.981		1.009	0.984
17				9.335				1.009
18				9.324				1.024
19				9.316				1.033
20				9.322				1.025
21				9.398				0.930
22				******				*****
23				******				*****
24				9.165				1.225
25				9.152				1.242
26				9.173				1.214
27				9.195				1.187
28				9.214				1.162
29	9.242		9.221	9.230	1.128		1.153	1.142
30	9.245		9.238	9.257	1.123		1.133	1.108
31	9.250		9.240	9.241	1.117		1.129	1.129
32	9.248		9.242	9.255	1.119		1.127	1.111
33	******	******	******	******	*****	*****	*****	*****
34	9.255	9.251	9.265	9.256	1.110	1.115	1.097	1.109
35	9.248	9.167	9.248	9.261	1.120	1.222	1.120	1.103
36		9.189				1.194		
37		9.209				1.170		
38		9.228				1.145		
39	9.251	9.241	9.249	9.258	1.116	1.129	1.119	1.107
40		9.248				1.120		
41		9.253				1.114		
42		9.254				1.112		
43	9.250	9.259	9.247	9.258	1.117	1.106	1.121	1.107
44		9.260				1.104		
45		9.257				1.108		
46		9.258				1.107		
47	10.036	9.257	9.250	9.254	0.122	1.109	1.117	1.111
48		9.261				1.104		
49	9.244	9.254	9.254	9.237	1.124	1.111	1.112	1.133

TABLE 60.—AXIAL WALL STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A8 (READINGS 65 TO 68; AIRFLOW, 72.17 kg/sec)

AXIAL STATION	PRESSURE, N/CM2 CIRCUM. LOCATION, DEG				COEFFICIENT CIRCUM. LOCATION, DEG			
	0	90	180	270	0	90	180	270
1		9.432				0.884		
2		9.424				0.893		
3		9.420				0.898		
4		9.423				0.895		
5		9.422				0.896		
6		9.442				0.870		
7		9.427				0.890		
8		9.419				0.899		
9		9.422				0.896		
10		9.415				0.904		
11	9.386	9.448	9.391	9.385	0.941	0.863	0.935	0.943
12	******	******	******	******	*****	*****	*****	*****
13	9.398		9.377	9.375	0.927		0.952	0.956
14	9.383		9.367	9.366	0.945		0.965	0.966
15	9.367		9.355	9.371	0.965		0.981	0.960
16	9.344		9.323	9.343	0.994		1.021	0.995
17				9.321				1.023
18				9.307				1.040
19				9.292				1.060
20				9.277				1.078
21				9.303				1.046
22				******				*****
23				******				*****
24				9.122				1.275
25				9.132				1.262
26				9.155				1.232
27				9.180				1.201
28				9.203				1.172
29	9.228		9.211	9.223	1.141		1.163	1.147
30	9.234		9.229	9.252	1.133		1.139	1.110
31	9.244		9.236	9.240	1.121		1.131	1.125
32	9.247		9.241	9.257	1.117		1.125	1.104
33	******	******	******	******	*****	*****	*****	*****
34	9.287	9.261	9.269	9.258	1.066	1.099	1.089	1.102
35	9.256	9.238	9.255	9.264	1.106	1.127	1.106	1.095
36		9.248				1.115		
37		9.254				1.108		
38		9.258				1.102		
39	9.259	9.263	9.259	9.265	1.101	1.097	1.102	1.094
40		9.262				1.098		
41		9.265				1.094		
42		9.262				1.097		
43	9.260	9.268	9.253	9.265	1.101	1.090	1.109	1.094
44		9.267				1.091		
45		9.259				1.101		
46		9.261				1.098		
47	9.986	9.261	9.259	9.262	0.185	1.098	1.102	1.097
48		9.266				1.092		
49	9.252	9.257	9.262	9.244	1.110	1.104	1.098	1.120

TABLE 61.—AXIAL WALL STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A10 (READINGS 458 TO 461; AIRFLOW, 72.24 kg/sec)

AXIAL STATION	PRESSURE, N/CM2 CIRCUM. LOCATION, DEG				COEFFICIENT CIRCUM. LOCATION, DEG			
	0	90	180	270	0	90	180	270
1		9.422				0.894		
2		9.411				0.906		
3		9.410				0.909		
4		9.412				0.905		
5		9.411				0.907		
6		9.432				0.881		
7		9.414				0.903		
8		9.409				0.909		
9		9.411				0.907		
10		9.398				0.923		
11	9.403	9.372	9.398	9.385	0.917	0.956	0.923	0.940
12	******	******	******	******	*****	*****	*****	*****
13	9.394		9.375	9.399	0.928		0.953	0.922
14	9.388		9.369	9.403	0.936		0.960	0.917
15	9.386		9.375	9.414	0.938		0.952	0.903
16	9.396		9.373	9.417	0.926		0.955	0.900
17				9.422				0.894
18				9.438				0.873
19				9.458				0.848
20				9.485				0.815
21				9.522				0.767
22				******				*****
23				******				*****
24				9.399				0.922
25				9.387				0.937
26				9.374				0.953
27				9.362				0.968
28				9.349				0.985
29	9.245		9.277	9.339	1.115		1.075	0.998
30	9.266		9.281	9.340	1.090		1.071	0.997
31	9.279		9.274	9.314	1.073		1.079	1.028
32	9.283		9.270	9.315	1.068		1.084	1.028
33	******	******	******	******	*****	*****	*****	*****
34	9.320	9.259	9.264	9.292	1.021	1.098	1.091	1.056
35	9.290	9.276	9.277	9.295	1.059	1.077	1.076	1.053
36		9.278				1.075		
37		9.280				1.072		
38		9.281				1.071		
39	9.288	9.282	9.280	9.287	1.062	1.069	1.072	1.063
40		9.281				1.070		
41		9.282				1.069		
42		9.282				1.069		
43	9.280	9.285	9.275	9.283	1.072	1.065	1.078	1.069
44		9.285				1.066		
45		9.281				1.070		
46		9.283				1.068		
47	10.081	9.281	9.276	9.278	0.065	1.070	1.076	1.075
48		9.285				1.066		
49	9.272	9.280	9.277	9.256	1.082	1.071	1.075	1.102

TABLE 62.—AXIAL WALL STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A11 (READINGS 696 TO 699; AIRFLOW, 72.87 kg/sec)

AXIAL STATION	PRESSURE, N/CM2 CIRCUM. LOCATION, DEG				COEFFICIENT CIRCUM. LOCATION, DEG			
	0	90	180	270	0	90	180	270
1		9.420				0.881		
2		9.410				0.893		
3		9.407				0.897		
4		9.410				0.894		
5		9.409				0.895		
6		9.416				0.887		
7		9.409				0.894		
8		9.406				0.898		
9		9.408				0.896		
10		9.402				0.904		
11	9.394	9.380	9.446	9.385	0.913	0.930	0.848	0.924
12	******	******	******	******	*****	*****	*****	*****
13	9.397		9.377	9.398	0.910		0.934	0.908
14	9.390		9.373	9.400	0.918		0.939	0.905
15	9.387		9.372	9.416	0.922		0.940	0.886
16	9.389		9.366	9.413	0.920		0.948	0.890
17				9.416				0.886
18				9.431				0.867
19				9.451				0.843
20				9.474				0.814
21				9.496				0.787
22				******				*****
23				******				*****
24				9.398				0.909
25				9.391				0.918
26				9.375				0.937
27				9.363				0.951
28				9.352				0.966
29	9.296		9.291	9.342	1.035		1.040	0.978
30	9.289		9.285	9.344	1.043		1.048	0.976
31	9.286		9.280	9.315	1.046		1.055	1.011
32	9.282		9.278	9.316	1.052		1.057	1.009
33	******	******	******	******	*****	*****	*****	*****
34	9.304	9.267	9.259	9.289	1.025	1.070	1.080	1.043
35	9.282	9.268	9.277	9.296	1.052	1.069	1.058	1.035
36		9.272				1.065		
37		9.275				1.060		
38		9.277				1.058		
39	9.279	9.280	9.279	9.286	1.055	1.055	1.055	1.047
40		9.281				1.054		
41		9.282				1.052		
42		9.282				1.052		
43	9.275	9.285	9.275	9.283	1.061	1.048	1.061	1.051
44		9.286				1.047		
45		9.283				1.051		
46		9.284				1.049		
47	10.157	9.282	9.275	9.276	-.031	1.052	1.060	1.059
48		9.285				1.048		
49	9.339	9.280	9.276	9.254	0.981	1.054	1.060	1.086

TABLE 63.—AXIAL WALL STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE B (READINGS 947 TO 950; AIRFLOW, 35.50 kg/sec)

AXIAL STATION	PRESSURE, N/CM2 CIRCUM. LOCATION, DEG				COEFFICIENT CIRCUM. LOCATION, DEG			
	0	90	180	270	0	90	180	270
1		9.989				0.777		
2		9.989				0.780		
3		9.988				0.785		
4		9.988				0.782		
5		9.988				0.785		
6		9.985				0.801		
7		9.986				0.799		
8		9.986				0.795		
9		9.984				0.806		
10		9.986				0.794		
11	9.984	9.981	9.983	9.988	0.807	0.823	0.814	0.787
12	******	******	******	******	*****	*****	*****	*****
13	9.987		9.984	9.988	0.791		0.807	0.783
14	9.986		9.984	9.990	0.795		0.807	0.777
15	9.986		9.984	9.995	0.795		0.804	0.747
16	9.987		9.985	9.993	0.788		0.803	0.759
17				9.994				0.751
18				9.997				0.733
19				10.003				0.706
20				10.009				0.671
21				10.018				0.623
22				******				*****
23				******				*****
24				9.973				0.864
25				9.973				0.865
26				9.972				0.871
27				9.971				0.876
28				9.970				0.882
29	9.964		9.963	9.970	0.917		0.923	0.885
30	9.963		9.961	9.970	0.923		0.930	0.885
31	9.963		9.961	9.967	0.924		0.932	0.901
32	9.962		9.961	9.967	0.927		0.932	0.902
33	******	******	******	******	*****	*****	*****	*****
34	9.958	9.960	9.964	9.963	0.950	0.936	0.917	0.922
35	9.960	9.956	9.960	9.961	0.936	0.958	0.937	0.930
36		9.957				0.951		
37		9.958				0.950		
38		9.958				0.950		
39	9.960	9.956	9.959	9.961	0.939	0.961	0.940	0.934
40		9.959				0.943		
41		9.959				0.944		
42		9.958				0.950		
43	9.959	9.959	9.959	9.960	0.944	0.945	0.940	0.940
44		9.959				0.945		
45		9.959				0.944		
46		9.959				0.945		
47	10.051	9.958	9.958	9.958	0.444	0.949	0.950	0.950
48		9.958				0.946		
49	9.969	9.958	9.959	9.955	0.891	0.947	0.943	0.966

TABLE 64.—AXIAL WALL STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE B (READINGS 951 TO 954; AIRFLOW, 56.52 kg/sec)

AXIAL STATION	PRESSURE, N/CM2 CIRCUM. LOCATION, DEG				COEFFICIENT CIRCUM. LOCATION, DEG			
	0	90	180	270	0	90	180	270
1		9.750				0.805		
2		9.748				0.809		
3		9.745				0.815		
4		9.747				0.812		
5		9.746				0.814		
6		9.739				0.830		
7		9.740				0.827		
8		9.739				0.830		
9		9.745				0.817		
10		9.742				0.823		
11	9.737	9.727	9.732	9.745	0.834	0.854	0.843	0.817
12	******	******	******	******	*****	*****	*****	*****
13	9.744		9.734	9.749	0.819		0.839	0.807
14	9.742		9.734	9.751	0.823		0.838	0.803
15	9.743		9.737	9.764	0.820		0.833	0.777
16	9.746		9.738	9.762	0.814		0.831	0.780
17				9.766				0.772
18				9.777				0.750
19				9.791				0.719
20				9.809				0.681
21				9.834				0.628
22				******				*****
23				******				*****
24				9.713				0.885
25				9.713				0.884
26				9.706				0.898
27				9.704				0.903
28				9.700				0.911
29	9.680		9.675	9.692	0.952		0.964	0.929
30	9.677		9.672	9.699	0.960		0.970	0.914
31	9.676		9.671	9.688	0.961		0.971	0.937
32	9.675		9.670	9.689	0.964		0.975	0.935
33	******	******	******	******	*****	*****	*****	*****
34	9.658	9.668	9.680	9.677	0.999	0.978	0.954	0.960
35	9.675	9.663	9.671	9.677	0.964	0.989	0.972	0.960
36		9.666				0.982		
37		9.667				0.980		
38		9.669				0.977		
39	9.672	9.670	9.673	9.673	0.970	0.974	0.969	0.968
40		9.670				0.975		
41		9.670				0.974		
42		9.669				0.976		
43	9.671	9.671	9.670	9.672	0.972	0.973	0.974	0.971
44		9.671				0.972		
45		9.669				0.976		
46		9.668				0.979		
47	10.072	9.668	9.669	9.667	0.128	0.978	0.976	0.980
48		9.669				0.976		
49	9.694	9.667	9.670	9.660	0.923	0.980	0.974	0.996

TABLE 65.—AXIAL WALL STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE B (READINGS 955 TO 958; AIRFLOW, 68.91 kg/sec)

AXIAL STATION	PRESSURE, N/CM2 CIRCUM. LOCATION, DEG				COEFFICIENT CIRCUM. LOCATION, DEG			
	0	90	180	270	0	90	180	270
1		9.529				0.841		
2		9.526				0.845		
3		9.521				0.852		
4		9.524				0.847		
5		9.522				0.851		
6		9.511				0.866		
7		9.513				0.864		
8		9.514				0.861		
9		9.520				0.854		
10		9.516				0.859		
11	9.508	9.493	9.501	9.521	0.871	0.891	0.880	0.853
12	******	******	******	******	*****	*****	*****	*****
13	9.518		9.502	9.527	0.856		0.879	0.844
14	9.516		9.503	9.530	0.859		0.877	0.839
15	9.516		9.507	9.550	0.859		0.871	0.811
16	9.521		9.507	9.548	0.852		0.871	0.815
17				9.554				0.806
18				9.572				0.781
19				9.595				0.749
20				9.626				0.706
21				9.667				0.649
22				******				*****
23				******				*****
24				9.475				0.917
25				9.466				0.928
26				9.461				0.936
27				9.452				0.948
28				9.446				0.957
29	9.415		9.403	9.441	1.001		1.017	0.964
30	9.409		9.399	9.443	1.009		1.023	0.960
31	9.408		9.398	9.422	1.010		1.023	0.991
32	9.405		9.396	9.427	1.014		1.027	0.983
33	******	******	******	******	*****	*****	*****	*****
34	9.376	9.393	9.413	9.407	1.054	1.030	1.002	1.011
35	9.406	9.387	9.399	9.409	1.013	1.039	1.022	1.009
36		9.392				1.033		
37		9.394				1.029		
38		9.393				1.031		
39	9.402	9.399	9.404	9.403	1.018	1.023	1.016	1.016
40		9.398				1.023		
41		9.400				1.021		
42		9.398				1.023		
43	9.401	9.401	9.399	9.401	1.020	1.020	1.022	1.019
44		9.401				1.019		
45		9.397				1.024		
46		9.395				1.028		
47	9.395	9.397	9.398	9.393	1.027	1.025	1.023	1.031
48		9.399				1.022		
49	9.435	9.394	9.399	9.377	0.972	1.030	1.022	1.052

TABLE 66.—AXIAL WALL STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE B (READINGS 959 TO 962; AIRFLOW, 73.42 kg/sec)

AXIAL STATION	PRESSURE, N/CM2 CIRCUM. LOCATION, DEG				COEFFICIENT CIRCUM. LOCATION, DEG			
	0	90	180	270	0	90	180	270
1		9.421				0.866		
2		9.416				0.872		
3		9.411				0.878		
4		9.415				0.874		
5		9.412				0.878		
6		9.399				0.892		
7		9.402				0.890		
8		9.403				0.888		
9		9.409				0.881		
10		9.405				0.886		
11	9.395	9.379	9.387	9.410	0.898	0.917	0.907	0.879
12	******	******	******	******	*****	*****	*****	*****
13	9.407		9.387	9.417	0.883		0.907	0.871
14	9.404		9.389	9.421	0.886		0.905	0.867
15	9.405		9.394	9.445	0.886		0.900	0.837
16	9.410		9.393	9.442	0.880		0.900	0.841
17				9.449				0.832
18				9.470				0.807
19				9.499				0.771
20				9.536				0.726
21				9.585				0.666
22				******				*****
23				******				*****
24				9.355				0.947
25				9.343				0.961
26				9.337				0.969
27				9.325				0.983
28				9.319				0.990
29	9.280		9.267	9.311	1.038		1.053	1.000
30	9.275		9.264	9.315	1.044		1.057	0.995
31	9.273		9.261	9.292	1.046		1.061	1.023
32	9.268		9.258	9.295	1.052		1.065	1.019
33	******	******	******	******	*****	*****	*****	*****
34	9.237	9.255	9.279	9.271	1.090	1.068	1.039	1.049
35	9.271	9.249	9.262	9.273	1.049	1.075	1.060	1.046
36		9.253				1.070		
37		9.257				1.066		
38		9.259				1.064		
39	9.265	9.261	9.267	9.268	1.056	1.061	1.054	1.053
40		9.261				1.061		
41		9.262				1.059		
42		9.261				1.060		
43	9.264	9.265	9.262	9.264	1.057	1.057	1.060	1.057
44		9.261				1.060		
45		9.260				1.062		
46		9.258				1.065		
47	9.259	9.261	9.262	9.255	1.063	1.061	1.060	1.068
48		9.263				1.059		
49	9.304	9.257	9.264	9.240	1.009	1.066	1.058	1.087

TABLE 67.—AXIAL WALL STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE B (READINGS 963 TO 966; AIRFLOW, 75.56 kg/sec)

AXIAL STATION	PRESSURE, N/CM2 CIRCUM. LOCATION, DEG				COEFFICIENT CIRCUM. LOCATION, DEG			
	0	90	180	270	0	90	180	270
1		9.386				0.856		
2		9.382				0.860		
3		9.376				0.867		
4		9.380				0.862		
5		9.377				0.867		
6		9.364				0.881		
7		9.366				0.879		
8		9.368				0.876		
9		9.374				0.870		
10		9.369				0.875		
11	9.359	9.345	9.351	9.375	0.886	0.903	0.896	0.868
12	******	******	******	******	*****	*****	*****	*****
13	9.371		9.350	9.382	0.873		0.897	0.860
14	9.368		9.353	9.386	0.876		0.894	0.856
15	9.368		9.357	9.409	0.876		0.889	0.829
16	9.374		9.356	9.407	0.870		0.890	0.832
17				9.415				0.822
18				9.438				0.796
19				9.468				0.762
20				9.507				0.716
21				9.559				0.657
22				******				*****
23				******				*****
24				9.309				0.944
25				9.303				0.951
26				9.295				0.960
27				9.284				0.973
28				9.277				0.981
29	9.236		9.223	9.269	1.027		1.042	0.989
30	9.231		9.218	9.273	1.033		1.048	0.985
31	9.229		9.217	9.250	1.036		1.050	1.012
32	9.225		9.214	9.252	1.040		1.053	1.010
33	******	******	******	******	*****	*****	*****	*****
34	9.194	9.211	9.236	9.228	1.076	1.056	1.027	1.037
35	9.226	9.205	9.219	9.230	1.039	1.063	1.048	1.035
36		9.209				1.058		
37		9.213				1.054		
38		9.215				1.052		
39	9.222	9.217	9.224	9.223	1.044	1.049	1.042	1.043
40		9.217				1.049		
41		9.218				1.048		
42		9.218				1.048		
43	9.220	9.220	9.218	9.221	1.046	1.046	1.048	1.045
44		9.220				1.046		
45		9.216				1.050		
46		9.213				1.054		
47	9.215	9.217	9.217	9.211	1.052	1.050	1.049	1.057
48		9.220				1.047		
49	9.260	9.213	9.220	9.194	1.000	1.055	1.046	1.076

TABLE 68.—AXIAL WALL STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE B (READINGS 967 TO 970; AIRFLOW, 78.89 kg/sec)

AXIAL STATION	PRESSURE, N/CM2 CIRCUM. LOCATION, DEG				COEFFICIENT CIRCUM. LOCATION, DEG			
	0	90	180	270	0	90	180	270
1		9.307				0.863		
2		9.302				0.867		
3		9.296				0.875		
4		9.297				0.873		
5		9.296				0.874		
6		9.284				0.887		
7		9.285				0.886		
8		9.286				0.884		
9		9.293				0.877		
10		9.288				0.883		
11	9.276	9.263	9.268	9.294	0.895	0.909	0.904	0.876
12	******	******	******	******	*****	*****	*****	*****
13	9.289		9.266	9.301	0.881		0.905	0.869
14	9.286		9.268	9.306	0.885		0.903	0.864
15	9.286		9.274	9.331	0.884		0.898	0.837
16	9.292		9.272	9.329	0.879		0.899	0.840
17				9.337				0.831
18				9.362				0.805
19				9.396				0.770
20				9.440				0.724
21				9.498				0.663
22				******				*****
23				******				*****
24				9.218				0.955
25				9.210				0.964
26				9.199				0.976
27				9.189				0.986
28				9.181				0.995
29	9.137		9.121	9.173	1.041		1.057	1.003
30	9.131		9.117	9.177	1.047		1.062	0.999
31	9.129		9.114	9.148	1.049		1.064	1.029
32	9.125		9.110	9.154	1.053		1.068	1.023
33	******	******	******	******	*****	*****	*****	*****
34	9.093	9.109	9.136	9.127	1.086	1.069	1.041	1.051
35	9.127	9.101	9.117	9.130	1.051	1.078	1.061	1.048
36		9.106				1.072		
37		9.111				1.068		
38		9.112				1.066		
39	9.403	9.116	9.123	9.122	0.762	1.063	1.055	1.056
40		9.115				1.064		
41		9.117				1.061		
42		9.115				1.063		
43	9.119	9.118	9.117	9.119	1.059	1.060	1.062	1.059
44		9.119				1.059		
45		9.115				1.064		
46		9.111				1.068		
47	9.113	9.115	9.117	9.108	1.065	1.064	1.062	1.071
48		9.118				1.060		
49	9.160	9.111	9.118	9.089	1.016	1.068	1.060	1.091

TABLE 69.—AXIAL WALL STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE B (READINGS 971 TO 974; AIRFLOW, 81.77 kg/sec)

AXIAL STATION	PRESSURE, N/CM2 CIRCUM. LOCATION, DEG				COEFFICIENT CIRCUM. LOCATION, DEG			
	0	90	180	270	0	90	180	270
1		9.265				0.841		
2		9.261				0.845		
3		9.254				0.852		
4		9.258				0.848		
5		9.254				0.852		
6		9.242				0.864		
7		9.243				0.862		
8		9.244				0.862		
9		9.251				0.854		
10		9.245				0.860		
11	9.233	9.221	9.224	9.252	0.872	0.883	0.881	0.854
12	******	******	******	******	*****	*****	*****	*****
13	9.248		9.223	9.259	0.858		0.882	0.847
14	9.243		9.223	9.263	0.862		0.881	0.843
15	9.243		9.230	9.290	0.862		0.875	0.817
16	9.249		9.229	9.287	0.857		0.876	0.820
17				9.297				0.810
18				9.323				0.785
19				9.359				0.750
20				9.405				0.705
21				9.467				0.645
22				******				*****
23				******				*****
24				9.169				0.935
25				9.162				0.941
26				9.152				0.950
27				9.140				0.963
28				9.130				0.972
29	9.084		9.067	9.123	1.017		1.033	0.979
30	9.076		9.064	9.126	1.024		1.036	0.976
31	9.076		9.060	9.098	1.024		1.040	1.004
32	9.071		9.056	9.102	1.029		1.043	1.000
33	******	******	******	******	*****	*****	*****	*****
34	9.046	9.056	9.084	9.074	1.054	1.044	1.016	1.026
35	9.074	9.047	9.064	9.077	1.027	1.053	1.036	1.023
36		9.052				1.048		
37		9.056				1.044		
38		9.059				1.040		
39	9.069	9.062	9.070	9.069	1.031	1.038	1.031	1.031
40		9.062				1.038		
41		9.063				1.037		
42		9.062				1.038		
43	9.066	9.066	9.064	9.066	1.034	1.034	1.036	1.034
44		9.066				1.034		
45		9.061				1.039		
46		9.058				1.042		
47	9.061	9.062	9.063	9.054	1.039	1.038	1.037	1.046
48		9.065				1.036		
49	9.107	9.058	9.066	9.033	0.994	1.042	1.034	1.066

TABLE 70.—AXIAL WALL STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A10 WITH SCOOP (READINGS 12A TO 15A; AIRFLOW, 73.10 kg/sec)

AXIAL STATION	PRESSURE, N/CM2 CIRCUM. LOCATION, DEG				COEFFICIENT CIRCUM. LOCATION, DEG			
	0	90	180	270	0	90	180	270
1		9.419				0.678		
2		9.415				0.682		
3		9.409				0.688		
4		9.412				0.685		
5		9.407				0.689		
6		9.397				0.699		
7		9.392				0.704		
8		9.355				0.739		
9		9.281				0.809		
10		9.221				0.866		
11	9.394	9.407	9.396	9.395	0.702	0.689	0.700	0.701
12	******	******	******	******	*****	*****	*****	*****
13	9.097		9.067	9.242	0.985		1.013	0.847
14	9.164		9.154	9.261	0.921		0.930	0.829
15	9.123		9.121	9.324	0.960		0.961	0.769
16	9.098		9.102	9.337	0.983		0.979	0.756
17				9.395				0.701
18				9.467				0.633
19				9.540				0.563
20				9.603				0.503
21				9.649				0.460
22				******				*****
23				******				*****
24				******				*****
25				******				*****
26				******				*****
27				******				*****
28				******				*****
29	8.958		8.919	******	1.117		1.153	*****
30	9.021		9.001	******	1.057		1.076	*****
31	9.080		9.057	******	1.001		1.022	*****
32	9.128		9.102	******	0.955		0.979	*****
33	******	******	******	******	*****	*****	*****	*****
34	9.218	9.233	9.230	9.240	0.869	0.855	0.858	0.849
35	9.202	9.163	9.184	9.385	0.884	0.921	0.901	0.710
36		9.179				0.906		
37		9.191				0.895		
38		9.200				0.887		
39	9.231	9.210	9.228	9.294	0.857	0.877	0.859	0.797
40		9.215				0.872		
41		9.221				0.867		
42		9.223				0.864		
43	9.240	9.229	9.234	9.264	0.849	0.859	0.854	0.826
44		9.232				0.856		
45		9.232				0.856		
46		9.232				0.856		
47	9.238	9.236	9.236	9.240	0.850	0.853	0.852	0.848
48		9.240				0.848		
49	9.274	9.239	9.238	9.215	0.816	0.849	0.850	0.872

TABLE 71.—AXIAL WALL STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A10 WITH SCOOP (READINGS 16A TO 19A; AIRFLOW, 74.88 kg/sec)

AXIAL STATION	PRESSURE, N/CM2 CIRCUM. LOCATION, DEG				COEFFICIENT CIRCUM. LOCATION, DEG			
	0	90	180	270	0	90	180	270
1		9.384				0.676		
2		9.380				0.680		
3		9.375				0.684		
4		9.377				0.682		
5		9.373				0.686		
6		9.363				0.695		
7		9.357				0.700		
8		9.318				0.735		
9		9.237				0.808		
10		9.176				0.864		
11	9.360	9.370	9.362	9.360	0.698	0.688	0.696	0.698
12	******	******	******	******	*****	*****	*****	*****
13	9.046		9.015	9.198	0.981		1.009	0.844
14	9.115		9.102	9.217	0.919		0.930	0.827
15	9.073		9.070	9.282	0.957		0.959	0.768
16	9.046		9.050	9.301	0.981		0.977	0.750
17				9.359				0.699
18				9.435				0.630
19				9.512				0.561
20				9.578				0.501
21				9.625				0.458
22				******				*****
23				******				*****
24				******				*****
25				******				*****
26				******				*****
27				******				*****
28				******				*****
29	8.896		8.856	******	1.116		1.153	*****
30	8.963		8.942	******	1.056		1.075	*****
31	9.025		9.001	******	1.000		1.022	*****
32	9.077		9.051	******	0.953		0.977	*****
33	******	******	******	******	*****	*****	*****	*****
34	9.170	9.185	9.184	9.195	0.869	0.855	0.856	0.846
35	9.156	9.115	9.137	9.348	0.882	0.919	0.899	0.709
36		9.131				0.904		
37		9.144				0.893		
38		9.153				0.884		
39	9.186	9.164	9.183	9.253	0.854	0.875	0.857	0.794
40		9.169				0.870		
41		9.175				0.865		
42		9.178				0.862		
43	9.196	9.184	9.189	9.217	0.846	0.857	0.852	0.826
44		9.187				0.854		
45		9.187				0.854		
46		9.186				0.854		
47	9.193	9.191	9.192	9.196	0.848	0.850	0.849	0.846
48		9.196				0.846		
49	9.228	9.193	9.194	9.168	0.817	0.848	0.848	0.871

TABLE 72.—AXIAL WALL STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A10 WITH SCOOP (READINGS 20A TO 24A; AIRFLOW, 78.32 kg/sec)

AXIAL STATION	PRESSURE, N/CM2 CIRCUM. LOCATION, DEG				COEFFICIENT CIRCUM. LOCATION, DEG			
	0	90	180	270	0	90	180	270
1		9.305				0.678		
2		9.300				0.681		
3		9.295				0.686		
4		9.297				0.684		
5		9.293				0.688		
6		9.280				0.698		
7		9.276				0.702		
8		9.231				0.738		
9		9.144				0.810		
10		9.071				0.869		
11	9.277	9.294	9.281	9.278	0.700	0.686	0.698	0.700
12	******	******	******	******	*****	*****	*****	*****
13	8.925		8.890	9.093	0.989		1.018	0.851
14	9.002		8.990	9.111	0.926		0.935	0.836
15	8.953		8.952	9.186	0.966		0.967	0.775
16	8.923		8.928	9.208	0.990		0.986	0.757
17				9.272				0.705
18				9.357				0.635
19				9.443				0.565
20				9.517				0.504
21				9.569				0.461
22				******				*****
23				******				*****
24				******				*****
25				******				*****
26				******				*****
27				******				*****
28				******				*****
29	8.751		8.705	******	1.132		1.169	*****
30	8.828		8.805	******	1.068		1.087	*****
31	8.898		8.871	******	1.011		1.033	*****
32	8.956		8.927	******	0.963		0.987	*****
33	******	******	******	******	*****	*****	*****	*****
34	9.065	9.083	9.079	9.090	0.875	0.860	0.863	0.853
35	9.043	9.001	9.025	9.259	0.892	0.927	0.907	0.715
36		9.018				0.912		
37		9.033				0.901		
38		9.044				0.892		
39	9.079	9.055	9.077	9.153	0.862	0.883	0.865	0.802
40		9.061				0.877		
41		9.068				0.872		
42		9.071				0.869		
43	9.091	9.078	9.083	9.118	0.853	0.864	0.859	0.831
44		9.080				0.861		
45		9.080				0.861		
46		9.078				0.864		
47	9.087	9.085	9.086	9.090	0.856	0.858	0.857	0.854
48		9.090				0.853		
49	9.123	9.088	9.088	9.059	0.827	0.855	0.855	0.879

TABLE 73.—AXIAL WALL STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A10 WITH SCOOP (READINGS 25A TO 28A; AIRFLOW, 35.46 kg/sec)

AXIAL STATION	PRESSURE, N/CM2 CIRCUM. LOCATION, DEG				COEFFICIENT CIRCUM. LOCATION, DEG			
	0	90	180	270	0	90	180	270
1		9.987				0.618		
2		9.987				0.619		
3		9.986				0.623		
4		9.987				0.621		
5		9.985				0.626		
6		9.983				0.635		
7		9.982				0.642		
8		9.975				0.671		
9		9.961				0.729		
10		9.950				0.777		
11	9.983	9.985	9.983	9.984	0.636	0.626	0.636	0.634
12	******	******	******	******	*****	*****	*****	*****
13	9.929		9.924	9.958	0.868		0.889	0.743
14	9.941		9.940	9.962	0.814		0.818	0.727
15	9.935		9.935	9.975	0.840		0.842	0.670
16	9.931		9.931	9.978	0.859		0.857	0.659
17				9.987				0.618
18				10.001				0.561
19				10.014				0.502
20				10.026				0.454
21				10.035				0.416
22				******				*****
23				******				*****
24				******				*****
25				******				*****
26				******				*****
27				******				*****
28				******				*****
29	9.907		9.902	******	0.961		0.983	*****
30	9.917		9.915	******	0.916		0.928	*****
31	9.927		9.924	******	0.874		0.888	*****
32	9.936		9.932	******	0.837		0.852	*****
33	******	******	******	******	*****	*****	*****	*****
34	9.951	9.954	9.954	9.956	0.773	0.758	0.760	0.751
35	9.946	9.939	9.945	9.982	0.793	0.825	0.799	0.639
36		9.942				0.812		
37		9.943				0.805		
38		9.946				0.793		
39	9.952	9.948	9.951	9.965	0.770	0.786	0.771	0.711
40		9.950				0.779		
41		9.950				0.777		
42		9.951				0.773		
43	9.954	9.952	9.953	9.959	0.759	0.769	0.766	0.737
44		9.953				0.766		
45		9.950				0.778		
46		9.952				0.767		
47	9.953	9.953	9.952	9.955	0.764	0.765	0.766	0.756
48		9.954				0.761		
49	9.960	9.954	9.953	9.950	0.733	0.761	0.762	0.777

TABLE 74.—AXIAL WALL STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A10 WITH SCOOP (READINGS 29A TO 32A; AIRFLOW, 56.42 kg/sec)

AXIAL STATION	PRESSURE, N/CM2 CIRCUM. LOCATION, DEG				COEFFICIENT CIRCUM. LOCATION, DEG			
	0	90	180	270	0	90	180	270
1		9.748				0.634		
2		9.746				0.637		
3		9.743				0.642		
4		9.745				0.639		
5		9.743				0.643		
6		9.737				0.653		
7		9.734				0.658		
8		9.715				0.689		
9		9.677				0.751		
10		9.647				0.801		
11	9.736	9.743	9.737	9.736	0.654	0.643	0.653	0.653
12	******	******	******	******	*****	*****	*****	*****
13	9.586		9.572	9.663	0.901		0.924	0.774
14	9.621		9.616	9.673	0.844		0.853	0.757
15	9.601		9.599	9.708	0.878		0.879	0.701
16	9.588		9.591	9.716	0.897		0.894	0.688
17				9.744				0.641
18				9.781				0.580
19				9.818				0.519
20				9.851				0.463
21				9.875				0.424
22				******				*****
23				******				*****
24				******				*****
25				******				*****
26				******				*****
27				******				*****
28				******				*****
29	9.523		9.506	******	1 005		1.033	*****
30	9.554		9.543	******	0.955		0.972	*****
31	9.581		9.570	******	0.910		0.927	*****
32	9.604		9.594	******	0.872		0.888	*****
33	******	******	******	******	*****	*****	*****	*****
34	9.649	9.658	9.656	9.661	0.798	0.782	0.786	0.777
35	9.642	9.619	9.633	9.734	0.810	0.847	0.824	0.657
36		9.627				0.833		
37		9.633				0.823		
38		9.638				0.815		
39	9.654	9.644	9.653	9.690	0.789	0.806	0.791	0.730
40		9.647				0.800		
41		9.649				0.797		
42		9.652				0.793		
43	9.660	9.654	9.657	9.674	0.779	0.789	0.785	0.756
44		9.655				0.787		
45		9.656				0.785		
46		9.656				0.786		
47	9.659	9.657	9.658	9.662	0.782	0.784	0.783	0.777
48		9.660				0.780		
49	9.675	9.659	9.659	9.646	0.755	0.781	0.781	0.803

TABLE 75.—AXIAL WALL STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A10 WITH SCOOP (READINGS 33A TO 36A; AIRFLOW, 68.73 kg/sec)

AXIAL STATION	PRESSURE, N/CM2 CIRCUM. LOCATION, DEG				COEFFICIENT CIRCUM. LOCATION, DEG			
	0	90	180	270	0	90	180	270
1		9.526				0.660		
2		9.523				0.663		
3		9.519				0.668		
4		9.521				0.666		
5		9.517				0.670		
6		9.509				0.679		
7		9.504				0.684		
8		9.473				0.718		
9		9.412				0.784		
10		9.362				0.839		
11	9.507	9.518	9.509	9.508	0.681	0.669	0.679	0.680
12	******	******	******	******	*****	*****	*****	*****
13	9.261		9.237	9.383	0.949		0.975	0.816
14	9.316		9.304	9.398	0.889		0.902	0.799
15	9.281		9.280	9.451	0.927		0.928	0.742
16	9.262		9.265	9.465	0.948		0.944	0.726
17				9.511				0.676
18				9.572				0.611
19				9.632				0.544
20				9.686				0.486
21				9.724				0.445
22				******				*****
23				******				*****
24				******				*****
25				******				*****
26				******				*****
27				******				*****
28				******				*****
29	9.149		9.119	******	1.070		1.104	*****
30	9.201		9.185	******	1.014		1.031	*****
31	9.249		9.230	******	0.962		0.982	*****
32	9.288		9.268	******	0.919		0.941	*****
33	******	******	******	******	*****	*****	*****	*****
34	9.362	9.376	9.372	9.381	0.838	0.823	0.827	0.818
35	9.350	9.316	9.336	9.504	0.852	0.889	0.867	0.684
36		9.329				0.875		
37		9.338				0.864		
38		9.348				0.854		
39	9.372	9.355	9.371	9.427	0.828	0.846	0.829	0.768
40		9.360				0.841		
41		9.364				0.836		
42		9.367				0.834		
43	9.380	9.372	9.375	9.402	0.819	0.828	0.824	0.795
44		9.373				0.827		
45		9.374				0.826		
46		9.374				0.826		
47	9.379	9.376	9.378	9.381	0.821	0.823	0.821	0.817
48		9.381				0.818		
49	9.403	9.380	9.379	9.360	0.794	0.820	0.820	0.841

TABLE 76.—AXIAL WALL STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A10 WITH SCOOP (READINGS 37A TO 40A; AIRFLOW, 81.33 kg/sec)

AXIAL STATION	PRESSURE, N/CM2 CIRCUM. LOCATION, DEG				COEFFICIENT CIRCUM. LOCATION, DEG			
	0	90	180	270	0	90	180	270
1		9.267				0.656		
2		9.262				0.660		
3		9.256				0.665		
4		9.259				0.662		
5		9.254				0.666		
6		9.242				0.676		
7		9.236				0.680		
8		9.186				0.717		
9		9.098				0.785		
10		9.020				0.843		
11	9.239	9.256	9.242	9.240	0.678	0.665	0.675	0.677
12	******	******	******	******	*****	*****	*****	*****
13	8.867		8.832	9.042	0.960		0.986	0.827
14	8.947		8.935	9.064	0.899		0.908	0.810
15	8.896		8.893	9.139	0.938		0.940	0.754
16	8.864		8.869	9.163	0.962		0.958	0.735
17				9.230				0.684
18				9.319				0.617
19				9.409				0.548
20				9.487				0.489
21				9.543				0.447
22				******				*****
23				******				*****
24				******				*****
25				******				*****
26				******				*****
27				******				*****
28				******				*****
29	8.676		8.630	******	1.104		1.139	*****
30	8.759		8.736	******	1.042		1.059	*****
31	8.834		8.806	******	0.985		1.006	*****
32	8.897		8.865	******	0.937		0.961	*****
33	******	******	******	******	*****	*****	*****	*****
34	9.012	9.031	9.025	9.039	0.850	0.835	0.840	0.829
35	8.992	8.944	8.971	9.216	0.865	0.901	0.881	0.695
36		8.963				0.887		
37		8.978				0.875		
38		8.989				0.867		
39	9.027	9.001	9.025	9.104	0.838	0.858	0.840	0.780
40		9.008				0.853		
41		9.014				0.848		
42		9.018				0.845		
43	9.038	9.025	9.032	9.067	0.830	0.840	0.835	0.808
44		9.028				0.837		
45		9.028				0.838		
46		9.028				0.837		
47	9.036	9.033	9.034	9.037	0.831	0.834	0.833	0.830
48		9.039				0.829		
49	9.067	9.037	9.036	9.005	0.808	0.831	0.831	0.855

TABLE 77.—SCOOP STATIC PRESSURES FOR CORNER 1 WITH VANE A10 WITH SCOOP (READINGS 12A TO 15A; AIRFLOW, 73.10 kg/sec)

[Pressures are in newtons per square centimeter.]

CORNER INLET CIRCUMFERENTIAL LOCATION, DEG			
0	90	180	270
9.362	9.054	9.363	9.152

VANE INLET			
9.093	8.945	9.097	9.595

	EXIT			
AXIAL STATION	A TOP	B TOP	B BOTTOM	C TOP
S1				10.083
S2		8.529	8.545	8.503
S3		8.651		
S4	8.719	8.701	8.702	8.668
S5		8.775		
S6	8.868	8.873	8.870	8.877
S7		8.976		
S8	9.049	9.076	9.072	9.092
S9		9.169		
S10		9.212		
S11	9.214	9.259	9.247	9.278
S12		9.302		
S13	9.300	9.346		9.358
S14		9.383		
S15	9.419	9.442		9.459

TABLE 78.—SCOOP STATIC PRESSURES FOR CORNER 1 WITH VANE A10 WITH SCOOP (READINGS 16A TO 19A; AIRFLOW, 74.88 kg/sec)

[Pressures are in newtons per square centimeter.]

CORNER INLET CIRCUMFERENTIAL LOCATION, DEG			
0	90	180	270
9.327	9.002	9.326	9.103

VANE INLET			
9.042	8.886	9.045	9.568

	EXIT			
AXIAL STATION	A TOP	B TOP	B BOTTOM	C TOP
S1				10.080
S2		8.443	8.459	8.415
S3		8.572		
S4	8.645	8.625	8.626	8.592
S5		8.703		
S6	8.805	8.807	8.803	8.812
S7		8.917		
S8	8.994	9.022	9.019	9.039
S9		9.121		
S10		9.165		
S11	9.169	9.214	9.203	9.235
S12		9.259		
S13	9.257	9.306		9.319
S14		9.345		
S15	9.383	9.408		9.426

TABLE 79.—SCOOP STATIC PRESSURES FOR CORNER 1 WITH VANE A10 WITH SCOOP (READINGS 20A TO 24A; AIRFLOW, 78.32 kg/sec)

[Pressures are in newtons per square centimeter.]

CORNER INLET			
CIRCUMFERENTIAL LOCATION, DEG			
0	90	180	270
9.241	8.875	9.237	8.991

VANE INLET			
8.924	8.746	8.926	9.506

EXIT				
AXIAL STATION	A TOP	B TOP	B BOTTOM	C TOP
S1				10.076
S2		8.235	8.256	8.198
S3		8.381		
S4	8.464	8.442	8.443	8.402
S5		8.531		
S6	8.649	8.649	8.647	8.654
S7		8.774		
S8	8.861	8.892	8.889	8.911
S9		9.003		
S10		9.053		
S11	9.058	9.109	9.097	9.132
S12		9.157		
S13	9.158	9.212		9.227
S14		9.255		
S15	9.297	9.326		9.345

TABLE 80.—SCOOP STATIC PRESSURES FOR CORNER 1 WITH VANE A10 WITH SCOOP (READINGS 25A TO 28A; AIRFLOW, 35.46 kg/sec)

[Pressures are in newtons per square centimeter.]

CORNER INLET			
CIRCUMFERENTIAL LOCATION, DEG			
0	90	180	270
9.977	9.916	9.976	9.940

VANE INLET			
9.924	9.902	9.928	10.025

EXIT				
AXIAL STATION	A TOP	B TOP	B BOTTOM	C TOP
S1				10.121
S2		9.831	9.834	9.829
S3		9.853		
S4	9.864	9.862	9.862	9.857
S5		9.874		
S6	9.890	9.891	9.891	9.892
S7		9.909		
S8	9.922	9.924	9.926	9.930
S9		9.944		
S10		9.952		
S11	9.952	9.960	9.958	9.964
S12		9.969		
S13	9.969	9.978		9.979
S14		9.984		
S15	9.992	9.991		9.998

TABLE 81.—SCOOP STATIC PRESSURES FOR CORNER 1 WITH VANE A10 WITH SCOOP (READINGS 29A TO 32A; AIRFLOW, 56.42 kg/sec)

[Pressures are in newtons per square centimeter.]

CORNER INLET			
CIRCUMFERENTIAL LOCATION, DEG			
0	90	180	270
9.720	9.555	9.718	9.616

VANE INLET			
9.581	9.507	9.584	9.847

	EXIT			
AXIAL STATION	A TOP	B TOP	B BOTTOM	C TOP
S1				10.107
S2		9.311	9.319	9.302
S3		9.373		
S4	9.404	9.398	9.398	9.383
S5		9.433		
S6	9.479	9.481	9.479	9.483
S7		9.531		
S8	9.566	9.580	9.579	9.589
S9		9.628		
S10		9.649		
S11	9.650	9.673	9.668	9.682
S12		9.695		
S13	9.695	9.719		9.724
S14		9.737		
S15	9.760	9.768		9.777

TABLE 82.—SCOOP STATIC PRESSURES FOR CORNER 1 WITH VANE A10 WITH SCOOP (READINGS 33A TO 36A; AIRFLOW, 68.73 kg/sec)

[Pressures are in newtons per square centimeter.]

CORNER INLET			
CIRCUMFERENTIAL LOCATION, DEG			
0	90	180	270
9.481	9.218	9.479	9.309

VANE INLET			
9.256	9.134	9.258	9.678

	EXIT			
AXIAL STATION	A TOP	B TOP	B BOTTOM	C TOP
S1				10.090
S2		8.798	8.811	8.779
S3		8.900		
S4	8.954	8.940	8.941	8.914
S5		9.000		
S6	9.077	9.080	9.078	9.084
S7		9.164		
S8	9.224	9.246	9.244	9.260
S9		9.323		
S10		9.359		
S11	9.361	9.398	9.389	9.413
S12		9.434		
S13	9.432	9.472		9.478
S14		9.501		
S15	9.535	9.551		9.566

TABLE 83.—SCOOP STATIC PRESSURES FOR CORNER 1 WITH VANE A10 WITH SCOOP (READINGS 37A TO 40A; AIRFLOW, 81.33 kg/sec)

[Pressures are in newtons per square centimeter.]

CORNER INLET			
CIRCUMFERENTIAL LOCATION, DEG			
0	90	180	270
9.201	8.817	9.196	8.936

VANE INLET			
8.867	8.678	8.870	9.476

	EXIT			
AXIAL STATION	A TOP	B TOP	B BOTTOM	C TOP
S1				10.073
S2		8.133	8.155	8.096
S3		8.288		
S4	8.373	8.350	8.355	8.307
S5		8.445		
S6	8.572	8.573	8.568	8.576
S7		8.703		
S8	8.798	8.828	8.826	8.850
S9		8.947		
S10		8.999		
S11	9.004	9.058	9.046	9.082
S12		9.111		
S13	9.106	9.166		9.179
S14		9.212		
S15	9.253	9.286		9.306

TABLE 84.—VANE SURFACE STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A
(READINGS 8 TO 11; AIRFLOW, 72.16 kg/sec)

(A) SECTION A

	PRESSURE, N/CM2		MACH NO		COEFFICIENT	
XC/C	SUCT	PRESS	SUCT	PRESS	SUCT	PRESS
0.000	9.395	9.393	0.330	0.331	0.092	0.088
0.025	8.491	9.280	0.509	0.356	-1.050	-0.053
0.050	8.276	9.183	0.546	0.378	-1.321	-0.177
0.075	8.155	9.255	0.566	0.362	-1.474	-0.085
0.100	8.056	9.330	0.582	0.345	-1.599	0.009
0.150	7.880	9.411	0.610	0.326	-1.821	0.112
0.200	7.763	9.439	0.629	0.320	-1.968	0.146
0.300	7.709	9.477	0.637	0.310	-2.037	0.195
0.500	8.034	9.433	0.585	0.321	-1.627	0.140
0.700	8.436	9.296	0.518	0.353	-1.119	-0.033
0.800	8.571	9.170	0.495	0.380	-0.949	-0.193
0.850	8.643	9.975	0.482	0.150	-0.857	0.823
0.900	8.693	8.952	0.473	0.424	-0.794	-0.468
0.950	8.693	8.778	0.473	0.457	-0.795	-0.687

(B) SECTION B

0.000	9.121	9.122	0.390	0.390	-0.254	-0.254
0.025	8.448	9.546	0.516	0.293	-1.103	0.282
0.050	8.393	9.374	0.526	0.335	-1.173	0.065
0.075	8.292	9.410	0.543	0.327	-1.301	0.110
0.100	8.271	9.456	0.546	0.316	-1.327	0.168
0.150	8.228	9.518	0.554	0.300	-1.382	0.246
0.200	8.245	9.565	0.551	0.288	-1.360	0.305
0.300	8.265	9.628	0.547	0.271	-1.335	0.385
0.500	8.666	9.627	0.478	0.271	-0.829	0.384
0.700	9.013	9.547	0.412	0.293	-0.391	0.283
0.800	9.110	9.466	0.393	0.313	-0.268	0.181
0.850	9.145	9.415	0.386	0.326	-0.225	0.117
0.900	9.165	9.341	0.381	0.343	-0.199	0.023
0.950	9.165	9.231	0.381	0.367	-0.199	-0.115

(C) SECTION C

0.000	9.068	9.068	0.401	0.401	-0.321	-0.321
0.025	8.429	9.499	0.520	0.305	-1.128	0.223
0.050	8.304	9.290	0.541	0.354	-1.286	-0.042
0.075	8.231	9.364	0.553	0.337	-1.378	0.052
0.100	8.200	9.417	0.558	0.325	-1.417	0.119
0.150	8.149	9.503	0.567	0.304	-1.481	0.227
0.200	8.158	9.550	0.565	0.292	-1.470	0.286
0.300	8.168	9.596	0.563	0.280	-1.457	0.345
0.500	8.625	9.605	0.485	0.277	-0.880	0.356
0.700	8.999	9.524	0.415	0.299	-0.408	0.254
0.800	9.122	9.451	0.390	0.317	-0.253	0.162
0.850	9.149	9.399	0.385	0.329	-0.220	0.096
0.900	9.181	9.339	0.378	0.343	-0.179	0.020
0.950	9.172	9.238	0.380	0.366	-0.190	-0.106

(D) SECTION D

0.000	8.643	8.645	0.482	0.482	-0.857	-0.856
0.025	8.629	10.014	0.485	0.130	-0.876	0.872
0.050	8.658	9.777	0.479	0.226	-0.839	0.573
0.075	8.691	9.742	0.473	0.238	-0.797	0.529
0.100	8.734	9.735	0.465	0.240	-0.743	0.521
0.150	8.787	9.749	0.456	0.235	-0.676	0.538
0.200	8.835	9.768	0.447	0.229	-0.615	0.562
0.300	8.897	9.794	0.435	0.221	-0.538	0.595
0.500	9.127	9.787	0.389	0.223	-0.246	0.586
0.700	9.305	9.721	0.351	0.244	-0.023	0.502
0.800	9.353	9.661	0.340	0.262	0.038	0.427
0.850	9.368	9.617	0.337	0.274	0.057	0.371
0.900	9.380	9.553	0.334	0.291	0.072	0.291
0.950	9.385	9.458	0.333	0.315	0.078	0.171

TABLE 85.—VANE SURFACE STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A
(READINGS 12 TO 15; AIRFLOW, 77.15 kg/sec)

(A) SECTION A

	PRESSURE, N/CM2		MACH NO		COEFFICIENT	
XC/C	SUCT	PRESS	SUCT	PRESS	SUCT	PRESS
0.000	9.304	9.303	0.351	0.351	0.119	0.119
0.025	8.248	9.131	0.550	0.388	-1.036	-0.070
0.050	7.995	9.022	0.592	0.411	-1.313	-0.189
0.075	7.855	9.106	0.614	0.394	-1.465	-0.097
0.100	7.739	9.195	0.633	0.375	-1.593	0.000
0.150	7.530	9.290	0.665	0.354	-1.822	0.104
0.200	7.393	9.320	0.686	0.348	-1.971	0.137
0.300	7.325	9.367	0.697	0.337	-2.046	0.188
0.500	7.688	9.314	0.641	0.349	-1.649	0.130
0.700	8.148	9.154	0.567	0.384	-1.146	-0.045
0.800	8.302	9.006	0.541	0.414	-0.977	-0.207
0.850	8.386	9.952	0.527	0.161	-0.885	0.828
0.900	8.444	8.750	0.517	0.463	-0.822	-0.487
0.950	8.440	8.545	0.518	0.499	-0.826	-0.711

(B) SECTION B

0.000	8.978	8.978	0.419	0.419	-0.238	-0.237
0.025	8.178	9.436	0.562	0.321	-1.113	0.263
0.050	8.118	9.238	0.572	0.366	-1.178	0.047
0.075	7.998	9.281	0.591	0.356	-1.309	0.094
0.100	7.971	9.336	0.596	0.344	-1.339	0.154
0.150	7.918	9.409	0.604	0.327	-1.397	0.234
0.200	7.937	9.466	0.601	0.313	-1.377	0.297
0.300	7.962	9.538	0.597	0.295	-1.349	0.375
0.500	8.426	9.536	0.520	0.296	-0.841	0.373
0.700	8.824	9.443	0.449	0.319	-0.406	0.272
0.800	8.936	9.351	0.428	0.340	-0.283	0.171
0.850	8.976	9.291	0.420	0.354	-0.240	0.105
0.900	9.000	9.203	0.415	0.373	-0.214	0.008
0.950	9.000	9.071	0.415	0.401	-0.213	-0.135

(C) SECTION C

0.000	8.916	8.916	0.431	0.431	-0.305	-0.306
0.025	8.156	9.370	0.565	0.336	-1.136	0.192
0.050	8.003	9.134	0.590	0.388	-1.304	-0.066
0.075	7.912	9.221	0.605	0.369	-1.403	0.029
0.100	7.879	9.287	0.610	0.355	-1.440	0.101
0.150	7.819	9.390	0.620	0.332	-1.506	0.213
0.200	7.827	9.444	0.619	0.319	-1.497	0.272
0.300	7.839	9.500	0.617	0.305	-1.483	0.334
0.500	8.372	9.511	0.529	0.302	-0.900	0.346
0.700	8.808	9.415	0.452	0.325	-0.423	0.241
0.800	8.950	9.332	0.425	0.345	-0.267	0.150
0.850	8.981	9.271	0.419	0.358	-0.234	0.083
0.900	9.018	9.202	0.411	0.374	-0.194	0.007
0.950	9.010	9.083	0.413	0.398	-0.203	-0.123

(D) SECTION D

0.000	8.400	8.399	0.525	0.525	-0.870	-0.870
0.025	8.386	9.993	0.527	0.141	-0.885	0.873
0.050	8.424	9.716	0.520	0.246	-0.844	0.570
0.075	8.466	9.676	0.513	0.257	-0.797	0.527
0.100	8.519	9.668	0.504	0.260	-0.739	0.517
0.150	8.584	9.684	0.493	0.255	-0.668	0.535
0.200	8.636	9.706	0.483	0.249	-0.611	0.558
0.300	8.710	9.737	0.470	0.239	-0.531	0.593
0.500	8.972	9.729	0.421	0.241	-0.244	0.584
0.700	9.173	9.652	0.380	0.264	-0.024	0.500
0.800	9.229	9.587	0.368	0.282	0.038	0.429
0.850	9.246	9.533	0.364	0.296	0.056	0.370
0.900	9.260	9.460	0.361	0.315	0.071	0.290
0.950	9.265	9.347	0.360	0.341	0.076	0.167

TABLE 86.—VANE SURFACE STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A
(READINGS 28 TO 31; AIRFLOW, 35.18 kg/sec)

(A) SECTION A

	PRESSURE, N/CM2		MACH NO		COEFFICIENT	
XC/C	SUCT	PRESS	SUCT	PRESS	SUCT	PRESS
0.000	9.957	9.957	0.158	0.158	0.033	0.032
0.025	9.784	9.976	0.224	0.149	-0.927	0.138
0.050	9.745	9.955	0.237	0.159	-1.145	0.019
0.075	9.722	9.965	0.244	0.154	-1.273	0.075
0.100	9.704	9.978	0.249	0.148	-1.371	0.147
0.150	9.672	9.991	0.259	0.142	-1.548	0.218
0.200	9.654	9.997	0.264	0.139	-1.648	0.255
0.300	9.643	10.005	0.267	0.135	-1.708	0.297
0.500	9.699	9.996	0.251	0.139	-1.400	0.250
0.700	9.803	9.969	0.218	0.153	-0.819	0.098
0.800	9.832	9.944	0.208	0.164	-0.663	-0.040
0.850	9.844	9.858	0.203	0.198	-0.594	-0.518
0.900	9.855	9.904	0.200	0.181	-0.534	-0.264
0.950	9.858	9.872	0.198	0.193	-0.516	-0.440

(B) SECTION B

0.000	9.917	9.918	0.175	0.175	-0.188	-0.185
0.025	9.794	10.030	0.221	0.121	-0.872	0.434
0.050	9.782	9.994	0.225	0.140	-0.936	0.234
0.075	9.766	9.998	0.230	0.138	-1.025	0.259
0.100	9.760	10.006	0.232	0.134	-1.059	0.304
0.150	9.753	10.014	0.234	0.130	-1.100	0.348
0.200	9.754	10.025	0.234	0.124	-1.091	0.406
0.300	9.762	10.034	0.231	0.118	-1.051	0.461
0.500	9.844	10.036	0.204	0.117	-0.596	0.467
0.700	9.915	10.020	0.176	0.126	-0.200	0.379
0.800	9.935	10.004	0.168	0.135	-0.090	0.293
0.850	9.942	9.994	0.165	0.140	-0.054	0.236
0.900	9.943	9.979	0.164	0.147	-0.046	0.156
0.950	9.945	9.959	0.163	0.157	-0.034	0.044

(C) SECTION C

0.000	9.907	9.907	0.179	0.180	-0.244	-0.248
0.025	9.794	10.022	0.221	0.125	-0.874	0.393
0.050	9.772	9.982	0.228	0.146	-0.993	0.169
0.075	9.759	9.991	0.232	0.142	-1.064	0.221
0.100	9.753	10.000	0.234	0.137	-1.099	0.268
0.150	9.745	10.011	0.237	0.131	-1.143	0.331
0.200	9.746	10.018	0.236	0.128	-1.137	0.368
0.300	9.749	10.030	0.235	0.120	-1.119	0.436
0.500	9.845	10.031	0.203	0.120	-0.590	0.440
0.700	9.911	10.014	0.178	0.130	-0.223	0.347
0.800	9.935	10.000	0.168	0.137	-0.093	0.268
0.850	9.941	9.990	0.165	0.142	-0.058	0.215
0.900	9.947	9.978	0.163	0.148	-0.026	0.149
0.950	9.946	9.960	0.163	0.157	-0.030	0.046

(D) SECTION D

0.000	9.843	9.844	0.204	0.204	-0.601	-0.596
0.025	9.839	10.111	0.205	0.055	-0.621	0.886
0.050	9.842	10.061	0.204	0.101	-0.603	0.607
0.075	9.848	10.056	0.202	0.104	-0.574	0.581
0.100	9.854	10.054	0.200	0.105	-0.541	0.569
0.150	9.863	10.056	0.197	0.104	-0.489	0.580
0.200	9.870	10.059	0.194	0.102	-0.453	0.599
0.300	9.885	10.064	0.188	0.098	-0.368	0.625
0.500	9.932	10.063	0.169	0.099	-0.109	0.617
0.700	9.967	10.049	0.153	0.108	0.087	0.543
0.800	9.976	10.038	0.149	0.116	0.138	0.479
0.850	9.979	10.029	0.148	0.121	0.154	0.430
0.900	9.981	10.016	0.147	0.128	0.164	0.361
0.950	9.982	9.997	0.146	0.138	0.168	0.255

TABLE 87.—VANE SURFACE STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A2
(READINGS 35 TO 38; AIRFLOW, 72.09 kg/sec)

(A) SECTION A

	PRESSURE, N/CM2		MACH NO		COEFFICIENT	
XC/C	SUCT	PRESS	SUCT	PRESS	SUCT	PRESS
0.000	9.887	9.887	0.187	0.187	0.711	0.712
0.025	8.709	7.834	0.470	0.618	-0.779	-1.886
0.050	8.337	8.394	0.535	0.526	-1.250	-1.177
0.075	8.093	8.761	0.576	0.460	-1.558	-0.712
0.100	7.891	8.961	0.608	0.423	-1.813	-0.460
0.150	7.562	9.141	0.660	0.386	-2.229	-0.233
0.200	7.381	9.230	0.688	0.367	-2.458	-0.120
0.300	7.411	9.345	0.684	0.342	-2.420	0.026
0.500	8.053	9.384	0.582	0.333	-1.608	0.075
0.700	8.587	9.319	0.492	0.348	-0.933	-0.008
0.800	8.740	9.233	0.464	0.367	-0.740	-0.116
0.850	8.808	9.964	0.452	0.155	-0.653	0.808
0.900	8.855	9.070	0.443	0.401	-0.594	-0.322
0.950	8.856	8.934	0.443	0.428	-0.592	-0.494

(B) SECTION B

0.000	9.121	9.120	0.390	0.391	-0.257	-0.259
0.025	8.455	9.563	0.515	0.289	-1.100	0.301
0.050	8.404	9.387	0.524	0.332	-1.164	0.079
0.075	8.304	9.421	0.541	0.324	-1.291	0.121
0.100	8.286	9.465	0.544	0.313	-1.314	0.177
0.150	8.244	9.526	0.551	0.298	-1.367	0.254
0.200	8.262	9.571	0.548	0.286	-1.343	0.312
0.300	8.284	9.632	0.544	0.270	-1.317	0.388
0.500	8.680	9.627	0.475	0.271	-0.816	0.382
0.700	9.022	9.549	0.411	0.292	-0.382	0.284
0.800	9.119	9.472	0.391	0.312	-0.260	0.186
0.850	9.152	9.420	0.384	0.324	-0.219	0.120
0.900	9.173	9.347	0.380	0.341	-0.192	0.028
0.950	9.173	9.235	0.380	0.366	-0.192	-0.113

(C) SECTION C

0.000	9.064	9.064	0.402	0.402	-0.330	-0.329
0.025	8.435	9.516	0.519	0.301	-1.125	0.242
0.050	8.312	9.309	0.539	0.350	-1.281	-0.020
0.075	8.243	9.375	0.551	0.335	-1.368	0.064
0.100	8.213	9.427	0.556	0.323	-1.406	0.129
0.150	8.166	9.509	0.564	0.302	-1.465	0.233
0.200	8.174	9.555	0.562	0.291	-1.455	0.291
0.300	8.186	9.600	0.561	0.279	-1.440	0.349
0.500	8.638	9.606	0.483	0.277	-0.869	0.356
0.700	9.011	9.529	0.413	0.297	-0.397	0.258
0.800	9.131	9.456	0.388	0.316	-0.245	0.166
0.850	9.157	9.405	0.383	0.328	-0.212	0.101
0.900	9.188	9.346	0.376	0.342	-0.173	0.027
0.950	9.182	9.245	0.378	0.364	-0.181	-0.101

(D) SECTION D

0.000	8.652	8.652	0.480	0.480	-0.851	-0.850
0.025	8.642	10.022	0.482	0.125	-0.863	0.881
0.050	8.672	9.785	0.477	0.224	-0.825	0.582
0.075	8.707	9.750	0.470	0.235	-0.781	0.538
0.100	8.750	9.742	0.463	0.238	-0.726	0.527
0.150	8.804	9.755	0.453	0.233	-0.658	0.544
0.200	8.852	9.773	0.444	0.228	-0.598	0.567
0.300	8.913	9.798	0.432	0.220	-0.520	0.598
0.500	9.143	9.793	0.386	0.221	-0.230	0.592
0.700	9.313	9.726	0.349	0.242	-0.015	0.508
0.800	9.363	9.671	0.338	0.259	0.048	0.437
0.850	9.377	9.624	0.334	0.272	0.066	0.378
0.900	9.390	9.562	0.331	0.289	0.082	0.300
0.950	9.393	9.463	0.331	0.314	0.087	0.175

TABLE 88.—VANE SURFACE STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A3
(READINGS 40 TO 43; AIRFLOW, 72.02 kg/sec)

(A) SECTION A

	PRESSURE, N/CM2		MACH NO		COEFFICIENT	
XC/C	SUCT	PRESS	SUCT	PRESS	SUCT	PRESS
0.000	9.869	9.869	0.194	0.194	0.689	0.688
0.025	8.662	7.841	0.479	0.616	-0.841	-1.881
0.050	8.286	8.520	0.544	0.504	-1.318	-1.021
0.075	8.036	8.826	0.585	0.449	-1.634	-0.634
0.100	7.838	9.022	0.617	0.411	-1.886	-0.386
0.150	7.507	9.198	0.669	0.374	-2.304	-0.162
0.200	7.311	9.286	0.699	0.355	-2.553	-0.051
0.300	7.316	9.395	0.698	0.330	-2.546	0.087
0.500	7.965	9.424	0.597	0.323	-1.724	0.124
0.700	8.540	9.347	0.500	0.342	-0.996	0.026
0.800	8.706	9.253	0.471	0.362	-0.785	-0.093
0.850	8.781	9.933	0.457	0.169	-0.691	0.769
0.900	8.834	9.078	0.447	0.399	-0.624	-0.314
0.950	8.839	8.932	0.446	0.428	-0.618	-0.499

(B) SECTION B

0.000	9.116	9.115	0.392	0.392	-0.266	-0.268
0.025	8.453	9.565	0.515	0.288	-1.106	0.302
0.050	8.402	9.388	0.524	0.332	-1.171	0.078
0.075	8.303	9.421	0.541	0.324	-1.296	0.120
0.100	8.285	9.465	0.544	0.313	-1.319	0.176
0.150	8.244	9.525	0.551	0.298	-1.370	0.252
0.200	8.262	9.571	0.548	0.287	-1.348	0.310
0.300	8.284	9.632	0.544	0.270	-1.320	0.387
0.500	8.681	9.626	0.475	0.272	-0.817	0.380
0.700	9.024	9.549	0.410	0.292	-0.383	0.283
0.800	9.120	9.472	0.391	0.312	-0.262	0.185
0.850	9.153	9.420	0.384	0.324	-0.219	0.119
0.900	9.173	9.347	0.380	0.341	-0.194	0.027
0.950	9.174	9.236	0.380	0.366	-0.193	-0.114

(C) SECTION C

0.000	9.059	9.057	0.403	0.404	-0.339	-0.341
0.025	8.431	9.521	0.519	0.299	-1.134	0.247
0.050	8.310	9.311	0.540	0.350	-1.288	-0.019
0.075	8.238	9.376	0.552	0.335	-1.378	0.064
0.100	8.212	9.428	0.556	0.322	-1.412	0.129
0.150	8.166	9.510	0.564	0.302	-1.469	0.233
0.200	8.174	9.555	0.562	0.291	-1.460	0.290
0.300	8.188	9.601	0.560	0.278	-1.442	0.348
0.500	8.640	9.609	0.483	0.276	-0.869	0.359
0.700	9.012	9.530	0.413	0.297	-0.398	0.258
0.800	9.132	9.457	0.388	0.315	-0.246	0.167
0.850	9.159	9.405	0.383	0.328	-0.212	0.100
0.900	9.190	9.347	0.376	0.342	-0.173	0.026
0.950	9.180	9.245	0.378	0.364	-0.185	-0.103

(D) SECTION D

0.000	8.650	8.650	0.481	0.481	-0.856	-0.856
0.025	8.641	10.024	0.482	0.124	-0.868	0.884
0.050	8.671	9.788	0.477	0.223	-0.830	0.585
0.075	8.707	9.751	0.470	0.235	-0.785	0.538
0.100	8.751	9.743	0.462	0.237	-0.729	0.528
0.150	8.805	9.755	0.452	0.233	-0.661	0.544
0.200	8.853	9.774	0.443	0.227	-0.599	0.567
0.300	8.914	9.798	0.432	0.220	-0.521	0.598
0.500	9.143	9.794	0.386	0.221	-0.231	0.593
0.700	9.316	9.727	0.348	0.242	-0.013	0.508
0.800	9.364	9.671	0.338	0.259	0.048	0.437
0.850	9.378	9.624	0.334	0.272	0.065	0.377
0.900	9.390	9.562	0.332	0.289	0.081	0.299
0.950	9.393	9.463	0.331	0.314	0.085	0.173

TABLE 89.—VANE SURFACE STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A4
(READINGS 46 TO 49; AIRFLOW, 72.04 kg/sec)

(A) SECTION A

	PRESSURE, N/CM2		MACH NO		COEFFICIENT	
XC/C	SUCT	PRESS	SUCT	PRESS	SUCT	PRESS
0.000	9.870	9.870	0.194	0.194	0.690	0.690
0.025	8.683	7.657	0.475	0.645	-0.813	-2.112
0.050	8.302	8.473	0.541	0.512	-1.296	-1.079
0.075	8.046	8.770	0.583	0.459	-1.619	-0.703
0.100	7.836	8.973	0.617	0.420	-1.886	-0.446
0.150	7.484	9.151	0.672	0.384	-2.331	-0.221
0.200	7.278	9.245	0.704	0.364	-2.592	-0.102
0.300	7.271	9.357	0.705	0.339	-2.601	0.040
0.500	7.935	9.390	0.601	0.331	-1.761	0.082
0.700	8.521	9.317	0.504	0.348	-1.019	-0.010
0.800	8.694	9.224	0.473	0.369	-0.799	-0.129
0.850	8.771	10.097	0.459	0.070	-0.702	0.977
0.900	8.826	9.042	0.448	0.406	-0.632	-0.358
0.950	8.837	8.890	0.446	0.436	-0.619	-0.551

(B) SECTION B

0.000	9.107	9.107	0.393	0.393	-0.276	-0.277
0.025	8.452	9.573	0.516	0.286	-1.106	0.314
0.050	8.403	9.394	0.524	0.331	-1.168	0.087
0.075	8.306	9.425	0.540	0.323	-1.290	0.126
0.100	8.288	9.467	0.543	0.313	-1.313	0.180
0.150	8.249	9.526	0.550	0.298	-1.362	0.254
0.200	8.270	9.571	0.547	0.286	-1.336	0.311
0.300	8.292	9.631	0.543	0.270	-1.309	0.387
0.500	8.689	9.624	0.474	0.272	-0.806	0.378
0.700	9.029	9.549	0.409	0.292	-0.375	0.283
0.800	9.123	9.473	0.390	0.312	-0.256	0.187
0.850	9.156	9.422	0.383	0.324	-0.214	0.122
0.900	9.176	9.349	0.379	0.341	-0.188	0.030
0.950	9.176	9.239	0.379	0.365	-0.189	-0.109

(C) SECTION C

0.000	9.049	9.049	0.405	0.405	-0.350	-0.350
0.025	8.429	9.534	0.520	0.296	-1.135	0.264
0.050	8.311	9.320	0.540	0.348	-1.284	-0.007
0.075	8.243	9.382	0.551	0.333	-1.370	0.072
0.100	8.218	9.433	0.555	0.321	-1.402	0.136
0.150	8.176	9.511	0.562	0.302	-1.455	0.235
0.200	8.185	9.558	0.561	0.290	-1.444	0.294
0.300	8.199	9.603	0.558	0.278	-1.427	0.351
0.500	8.648	9.608	0.481	0.276	-0.858	0.358
0.700	9.016	9.532	0.412	0.297	-0.391	0.262
0.800	9.136	9.459	0.387	0.315	-0.239	0.169
0.850	9.162	9.409	0.382	0.327	-0.207	0.106
0.900	9.193	9.350	0.375	0.341	-0.168	0.031
0.950	9.186	9.249	0.377	0.363	-0.177	-0.097

(D) SECTION D

0.000	8.636	8.637	0.483	0.483	-0.872	-0.872
0.025	8.633	10.023	0.484	0.124	-0.877	0.884
0.050	8.666	9.787	0.478	0.223	-0.835	0.585
0.075	8.701	9.751	0.472	0.235	-0.790	0.538
0.100	8.746	9.743	0.463	0.237	-0.733	0.529
0.150	8.801	9.755	0.453	0.233	-0.663	0.544
0.200	8.850	9.773	0.444	0.228	-0.602	0.567
0.300	8.911	9.797	0.432	0.220	-0.525	0.597
0.500	9.141	9.793	0.386	0.221	-0.233	0.592
0.700	9.316	9.726	0.349	0.242	-0.012	0.508
0.800	9.363	9.670	0.338	0.259	0.048	0.437
0.850	9.378	9.623	0.334	0.272	0.066	0.377
0.900	9.390	9.561	0.332	0.289	0.081	0.298
0.950	9.394	9.461	0.331	0.315	0.087	0.172

TABLE 90.—VANE SURFACE STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A7
(READINGS 59 TO 62; AIRFLOW, 72.00 kg/sec)

(A) SECTION A

	PRESSURE, N/CM2		MACH NO		COEFFICIENT	
XC/C	SUCT	PRESS	SUCT	PRESS	SUCT	PRESS
0.000	10.008	10.008	0.133	0.133	0.866	0.866
0.025	9.013	8.136	0.412	0.569	-0.394	-1.505
0.050	8.628	8.156	0.485	0.565	-0.882	-1.479
0.075	8.330	8.176	0.536	0.562	-1.259	-1.454
0.100	8.047	8.191	0.583	0.560	-1.617	-1.435
0.150	7.466	8.261	0.675	0.548	-2.353	-1.347
0.200	6.976	8.377	0.750	0.528	-2.973	-1.199
0.300	6.856	8.617	0.768	0.487	-3.125	-0.895
0.500	8.094	8.958	0.576	0.423	-1.557	-0.463
0.700	8.787	9.127	0.456	0.389	-0.681	-0.250
0.800	8.937	9.169	0.427	0.381	-0.491	-0.197
0.850	8.990	10.149	0.417	0.049	-0.423	1.045
0.900	9.023	9.169	0.410	0.381	-0.381	-0.197
0.950	9.018	9.148	0.411	0.385	-0.387	-0.223

(B) SECTION B

0.000	9.117	9.118	0.391	0.391	-0.262	-0.262
0.025	8.481	9.565	0.511	0.288	-1.068	0.305
0.050	8.434	9.397	0.519	0.330	-1.128	0.092
0.075	8.338	9.431	0.535	0.322	-1.249	0.135
0.100	8.317	9.475	0.539	0.311	-1.276	0.191
0.150	8.274	9.534	0.546	0.296	-1.330	0.266
0.200	8.292	9.579	0.543	0.284	-1.307	0.322
0.300	8.316	9.637	0.539	0.268	-1.277	0.396
0.500	8.705	9.636	0.471	0.269	-0.784	0.394
0.700	9.041	9.559	0.407	0.290	-0.359	0.297
0.800	9.134	9.482	0.388	0.309	-0.241	0.200
0.850	9.167	9.431	0.381	0.322	-0.199	0.135
0.900	9.186	9.358	0.377	0.339	-0.175	0.043
0.950	9.186	9.249	0.377	0.363	-0.175	-0.095

(C) SECTION C

0.000	9.054	9.051	0.404	0.405	-0.342	-0.346
0.025	8.451	9.508	0.516	0.303	-1.105	0.233
0.050	8.334	9.309	0.536	0.350	-1.253	-0.020
0.075	8.262	9.379	0.548	0.334	-1.345	0.069
0.100	8.233	9.432	0.553	0.321	-1.382	0.136
0.150	8.187	9.512	0.560	0.302	-1.440	0.237
0.200	8.194	9.560	0.559	0.289	-1.431	0.299
0.300	8.205	9.607	0.557	0.277	-1.417	0.358
0.500	8.655	9.614	0.480	0.275	-0.848	0.367
0.700	9.022	9.536	0.411	0.296	-0.383	0.269
0.800	9.143	9.462	0.386	0.314	-0.230	0.174
0.850	9.169	9.415	0.380	0.325	-0.196	0.116
0.900	9.200	9.355	0.374	0.340	-0.157	0.039
0.950	9.191	9.258	0.376	0.361	-0.168	-0.084

(D) SECTION D

0.000	9.803	9.805	0.218	0.217	0.606	0.608
0.025	9.215	9.823	0.371	0.211	-0.138	0.631
0.050	9.072	9.670	0.401	0.259	-0.320	0.437
0.075	8.967	9.690	0.422	0.253	-0.453	0.463
0.100	8.923	9.708	0.430	0.248	-0.508	0.486
0.150	8.862	9.744	0.442	0.237	-0.586	0.531
0.200	8.851	9.770	0.444	0.229	-0.599	0.565
0.300	8.882	9.812	0.438	0.215	-0.560	0.618
0.500	9.159	9.808	0.383	0.216	-0.209	0.612
0.700	9.355	9.748	0.340	0.236	0.039	0.536
0.800	9.403	9.696	0.328	0.251	0.100	0.471
0.850	9.414	9.655	0.326	0.263	0.114	0.419
0.900	9.421	9.598	0.324	0.279	0.122	0.346
0.950	9.405	9.502	0.328	0.304	0.103	0.226

TABLE 91.—VANE SURFACE STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A8
(READINGS 65 TO 68; AIRFLOW, 72.17 kg/sec)

(A) SECTION A

	PRESSURE, N/CM2		MACH NO		COEFFICIENT	
XC/C	SUCT	PRESS	SUCT	PRESS	SUCT	PRESS
0.000	9.945	9.948	0.164	0.162	0.785	0.789
0.025	8.746	7.632	0.463	0.649	-0.727	-2.131
0.050	8.309	7.885	0.540	0.609	-1.278	-1.813
0.075	7.990	8.012	0.593	0.589	-1.681	-1.653
0.100	7.694	8.126	0.640	0.570	-2.054	-1.509
0.150	7.130	8.391	0.727	0.526	-2.764	-1.175
0.200	6.773	8.621	0.781	0.486	-3.216	-0.885
0.300	6.876	8.904	0.765	0.434	-3.085	-0.527
0.500	7.993	9.152	0.592	0.384	-1.676	-0.215
0.700	8.666	9.210	0.478	0.372	-0.828	-0.141
0.800	8.828	9.191	0.448	0.376	-0.624	-0.165
0.850	8.889	10.067	0.437	0.096	-0.547	0.939
0.900	8.929	9.117	0.429	0.391	-0.496	-0.259
0.950	8.927	9.046	0.429	0.406	-0.498	-0.348

(B) SECTION B

0.000	9.099	9.099	0.395	0.395	-0.281	-0.281
0.025	8.456	9.561	0.515	0.289	-1.092	0.301
0.050	8.409	9.388	0.523	0.332	-1.152	0.083
0.075	8.313	9.422	0.539	0.324	-1.273	0.126
0.100	8.292	9.466	0.543	0.313	-1.299	0.182
0.150	8.252	9.526	0.550	0.298	-1.350	0.257
0.200	8.271	9.572	0.546	0.286	-1.326	0.315
0.300	8.293	9.629	0.543	0.271	-1.298	0.387
0.500	8.687	9.627	0.474	0.271	-0.801	0.384
0.700	9.026	9.550	0.410	0.292	-0.374	0.287
0.800	9.120	9.472	0.391	0.312	-0.255	0.190
0.850	9.153	9.421	0.384	0.324	-0.214	0.124
0.900	9.171	9.347	0.380	0.341	-0.190	0.031
0.950	9.173	9.235	0.380	0.366	-0.188	-0.110

(C) SECTION C

0.000	9.029	9.029	0.409	0.409	-0.370	-0.370
0.025	8.419	9.493	0.521	0.307	-1.140	0.215
0.050	8.300	9.291	0.542	0.354	-1.290	-0.040
0.075	8.228	9.366	0.554	0.337	-1.380	0.055
0.100	8.202	9.421	0.558	0.324	-1.413	0.125
0.150	8.156	9.504	0.566	0.304	-1.471	0.230
0.200	8.162	9.551	0.565	0.292	-1.464	0.289
0.300	8.176	9.598	0.562	0.279	-1.446	0.348
0.500	8.635	9.607	0.484	0.277	-0.867	0.360
0.700	9.008	9.529	0.413	0.297	-0.396	0.261
0.800	9.129	9.453	0.389	0.316	-0.243	0.165
0.850	9.155	9.406	0.383	0.328	-0.210	0.106
0.900	9.187	9.345	0.377	0.342	-0.171	0.028
0.950	9.179	9.246	0.378	0.364	-0.181	-0.096

(D) SECTION D

0.000	8.224	8.225	0.554	0.554	-1.385	-1.384
0.025	8.514	10.106	0.505	0.061	-1.019	0.988
0.050	8.578	9.891	0.494	0.186	-0.939	0.718
0.075	8.624	9.827	0.485	0.209	-0.880	0.637
0.100	8.677	9.803	0.476	0.218	-0.814	0.606
0.150	8.763	9.795	0.460	0.220	-0.706	0.597
0.200	8.807	9.801	0.452	0.218	-0.649	0.604
0.300	8.843	9.811	0.445	0.215	-0.604	0.616
0.500	9.063	9.789	0.402	0.222	-0.327	0.588
0.700	9.280	9.709	0.357	0.248	-0.054	0.488
0.800	9.356	9.649	0.339	0.265	0.042	0.413
0.850	9.384	9.603	0.333	0.278	0.078	0.354
0.900	9.409	9.541	0.327	0.294	0.110	0.276
0.950	9.423	9.440	0.324	0.320	0.127	0.149

TABLE 92.—VANE SURFACE STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A10
(READINGS 458 TO 461; AIRFLOW, 72.24 kg/sec)

(A) SECTION A

	PRESSURE, N/CM2		MACH NO		COEFFICIENT	
XC/C	SUCT	PRESS	SUCT	PRESS	SUCT	PRESS
0.000	9.760	9.759	0.232	0.232	0.555	0.554
0.025	8.975	8.732	0.420	0.466	-0.432	-0.738
0.050	8.749	8.995	0.463	0.416	-0.717	-0.407
0.075	8.607	9.214	0.488	0.371	-0.895	-0.132
0.100	8.490	9.340	0.509	0.343	-1.043	0.026
0.150	8.300	9.448	0.541	0.318	-1.281	0.163
0.200	8.202	9.504	0.558	0.304	-1.405	0.232
0.300	8.229	9.578	0.553	0.285	-1.370	0.326
0.500	8.679	9.603	0.475	0.278	-0.804	0.357
0.700	9.057	9.560	0.404	0.289	-0.329	0.303
0.800	9.163	9.503	0.382	0.304	-0.197	0.232
0.850	9.209	10.087	0.372	0.080	-0.139	0.966
0.900	9.238	9.395	0.366	0.330	-0.102	0.095
0.950	9.235	9.302	0.366	0.352	-0.105	-0.021

(B) SECTION B

0.000	9.515	9.515	0.301	0.301	0.247	0.247
0.025	8.678	8.697	0.476	0.472	-0.805	-0.783
0.050	8.519	8.887	0.504	0.437	-1.006	-0.543
0.075	8.342	9.114	0.534	0.392	-1.228	-0.257
0.100	8.245	9.271	0.551	0.358	-1.350	-0.060
0.150	8.122	9.397	0.571	0.330	-1.506	0.098
0.200	8.119	9.481	0.571	0.309	-1.508	0.204
0.300	8.201	9.570	0.558	0.287	-1.406	0.315
0.500	8.812	9.632	0.451	0.270	-0.637	0.394
0.700	9.131	9.596	0.388	0.280	-0.237	0.348
0.800	9.174	9.530	0.379	0.297	-0.182	0.266
0.850	9.188	9.487	0.377	0.308	-0.165	0.212
0.900	9.205	9.423	0.373	0.324	-0.143	0.131
0.950	9.211	9.326	0.371	0.346	-0.135	0.009

(C) SECTION C

0.000	9.375	9.375	0.335	0.335	0.071	0.071
0.025	8.567	8.528	0.496	0.502	-0.945	-0.995
0.050	8.335	8.665	0.536	0.478	-1.238	-0.822
0.075	8.181	9.041	0.561	0.407	-1.431	-0.349
0.100	8.082	9.172	0.578	0.380	-1.555	-0.185
0.150	7.923	9.330	0.603	0.345	-1.756	0.013
0.200	7.927	9.416	0.603	0.325	-1.750	0.122
0.300	8.004	9.514	0.590	0.301	-1.654	0.245
0.500	8.653	9.589	0.480	0.282	-0.837	0.340
0.700	9.083	9.552	0.398	0.292	-0.296	0.293
0.800	9.206	9.496	0.373	0.306	-0.142	0.222
0.850	9.240	9.459	0.365	0.315	-0.099	0.176
0.900	9.273	9.410	0.358	0.327	-0.058	0.114
0.950	9.275	9.332	0.358	0.345	-0.055	0.017

(D) SECTION D

0.000	8.704	8.705	0.471	0.471	-0.773	-0.772
0.025	8.666	10.141	0.478	0.036	-0.821	1.034
0.050	8.704	9.956	0.471	0.159	-0.773	0.801
0.075	8.756	9.883	0.461	0.189	-0.708	0.709
0.100	8.818	9.852	0.450	0.201	-0.630	0.671
0.150	8.901	9.838	0.434	0.206	-0.525	0.653
0.200	8.965	9.841	0.422	0.205	-0.446	0.657
0.300	9.021	9.845	0.411	0.203	-0.374	0.662
0.500	9.185	9.824	0.377	0.210	-0.169	0.635
0.700	9.315	9.746	0.349	0.236	-0.004	0.537
0.800	9.352	9.681	0.340	0.256	0.041	0.455
0.850	9.363	9.630	0.338	0.270	0.055	0.392
0.900	9.370	9.561	0.336	0.289	0.064	0.304
0.950	9.367	9.459	0.337	0.315	0.061	0.177

TABLE 93.—VANE SURFACE STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A11
(READINGS 696 TO 699; AIRFLOW, 72.87 kg/sec)

(A) SECTION A

	PRESSURE, N/CM2		MACH NO		COEFFICIENT	
XC/C	SUCT	PRESS	SUCT	PRESS	SUCT	PRESS
0.000	9.587	9.587	0.282	0.282	0.346	0.346
0.025	8.837	8.986	0.446	0.418	-0.582	-0.397
0.050	8.646	9.101	0.482	0.395	-0.818	-0.255
0.075	8.533	9.249	0.501	0.363	-0.957	-0.071
0.100	8.441	9.391	0.517	0.331	-1.072	0.103
0.150	8.299	9.485	0.542	0.309	-1.247	0.220
0.200	8.227	9.535	0.554	0.296	-1.336	0.282
0.300	8.276	9.603	0.546	0.278	-1.276	0.367
0.500	8.716	9.627	0.469	0.271	-0.731	0.395
0.700	9.087	9.582	0.397	0.284	-0.272	0.340
0.800	9.193	9.525	0.375	0.299	-0.141	0.269
0.850	9.235	10.066	0.366	0.097	-0.089	0.939
0.900	9.268	9.416	0.359	0.325	-0.049	0.134
0.950	9.265	9.324	0.360	0.347	-0.052	0.020

(B) SECTION B

0.000	9.536	9.537	0.296	0.295	0.283	0.284
0.025	8.732	9.269	0.466	0.359	-0.711	-0.047
0.050	8.604	9.236	0.489	0.366	-0.870	-0.088
0.075	8.461	9.334	0.514	0.344	-1.047	0.033
0.100	8.393	9.401	0.526	0.329	-1.131	0.116
0.150	8.314	9.529	0.539	0.297	-1.229	0.275
0.200	8.319	9.583	0.538	0.283	-1.223	0.341
0.300	8.360	9.635	0.531	0.269	-1.171	0.406
0.500	8.799	10.193	0.453	0.092	-0.628	1.096
0.700	9.128	9.609	0.389	0.276	-0.221	0.374
0.800	9.215	9.538	0.371	0.295	-0.114	0.286
0.850	9.245	9.493	0.364	0.306	-0.077	0.230
0.900	9.266	9.424	0.360	0.323	-0.051	0.145
0.950	9.266	9.321	0.360	0.347	-0.051	0.017

(C) SECTION C

0.000	9.491	9.489	0.307	0.307	0.227	0.226
0.025	8.719	9.296	0.468	0.353	-0.728	-0.014
0.050	8.527	9.190	0.503	0.376	-0.966	-0.146
0.075	8.413	9.314	0.522	0.349	-1.107	0.008
0.100	8.353	9.392	0.532	0.331	-1.180	0.105
0.150	8.268	9.519	0.547	0.300	-1.285	0.262
0.200	8.265	9.567	0.547	0.288	-1.290	0.321
0.300	8.304	9.628	0.541	0.271	-1.242	0.397
0.500	8.794	9.661	0.454	0.262	-0.635	0.438
0.700	9.141	9.605	0.386	0.277	-0.206	0.368
0.800	9.248	9.544	0.364	0.294	-0.074	0.292
0.850	9.271	9.504	0.358	0.304	-0.045	0.244
0.900	9.300	9.450	0.352	0.317	-0.009	0.177
0.950	9.292	9.362	0.354	0.338	-0.019	0.068

(D) SECTION D

0.000	8.750	8.751	0.463	0.462	-0.690	-0.688
0.025	8.603	10.050	0.489	0.108	-0.871	0.919
0.050	8.606	9.801	0.489	0.218	-0.867	0.612
0.075	8.630	9.756	0.484	0.233	-0.838	0.555
0.100	8.674	9.742	0.476	0.237	-0.783	0.538
0.150	8.740	9.753	0.464	0.234	-0.702	0.551
0.200	8.803	9.771	0.453	0.228	-0.624	0.574
0.300	8.879	9.794	0.438	0.221	-0.530	0.602
0.500	9.110	9.787	0.393	0.223	-0.244	0.594
0.700	9.281	9.718	0.356	0.245	-0.032	0.508
0.800	9.330	9.655	0.345	0.263	0.028	0.431
0.850	9.341	9.607	0.343	0.277	0.042	0.371
0.900	9.356	9.537	0.339	0.295	0.061	0.285
0.950	9.359	9.440	0.339	0.320	0.064	0.164

TABLE 94.—VANE SURFACE STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE B
(READINGS 947 TO 950; AIRFLOW, 35.50 kg/sec)

(A) SECTION A

	PRESSURE, N/CM2		MACH NO		COEFFICIENT	
XC/C	SUCT	PRESS	SUCT	PRESS	SUCT	PRESS
0.000	10.015	10.015	0.129	0.129	0.363	0.366
0.025	9.941	9.982	0.165	0.146	-0.040	0.187
0.050	9.939	9.883	0.166	0.189	-0.047	-0.353
0.075	9.919	9.916	0.175	0.176	-0.157	-0.173
0.100	9.906	9.975	0.180	0.149	-0.226	0.149
0.150	9.885	9.980	0.188	0.147	-0.343	0.176
0.200	9.872	9.989	0.193	0.143	-0.412	0.222
0.300	9.854	9.991	0.200	0.142	-0.512	0.236
0.500	9.846	9.993	0.203	0.141	-0.557	0.244
0.700	9.844	9.992	0.203	0.141	-0.565	0.238
0.800	9.853	9.989	0.200	0.143	-0.517	0.223
0.850	9.862	9.988	0.197	0.143	-0.470	0.216
0.900	9.873	9.986	0.193	0.145	-0.411	0.204
0.950	9.928	9.987	0.171	0.144	-0.108	0.210

(B) SECTION B

0.000	9.963	9.963	0.156	0.155	0.079	0.080
0.025	9.892	10.029	0.186	0.121	-0.305	0.443
0.050	9.886	9.878	0.188	0.191	-0.336	-0.379
0.075	9.877	9.909	0.191	0.179	-0.387	-0.210
0.100	9.867	9.986	0.195	0.144	-0.442	0.206
0.150	9.853	9.986	0.200	0.144	-0.516	0.207
0.200	9.842	9.990	0.204	0.142	-0.575	0.229
0.300	9.840	9.993	0.205	0.141	-0.586	0.246
0.500	9.841	9.999	0.204	0.138	-0.581	0.279
0.700	9.843	9.994	0.204	0.140	-0.569	0.253
0.800	9.851	9.992	0.201	0.141	-0.527	0.238
0.850	9.873	9.988	0.193	0.143	-0.408	0.219
0.900	9.913	9.982	0.177	0.146	-0.192	0.187
0.950	9.938	9.976	0.167	0.149	-0.057	0.153

(C) SECTION C

0.000	9.961	9.962	0.156	0.156	0.073	0.075
0.025	9.892	10.026	0.185	0.123	-0.304	0.425
0.050	9.892	9.869	0.186	0.194	-0.306	-0.432
0.075	9.882	9.909	0.189	0.179	-0.358	-0.213
0.100	9.871	9.983	0.194	0.146	-0.421	0.192
0.150	9.856	9.986	0.199	0.144	-0.499	0.207
0.200	9.846	9.989	0.203	0.143	-0.554	0.225
0.300	9.843	9.992	0.204	0.141	-0.570	0.241
0.500	9.843	9.998	0.204	0.138	-0.571	0.271
0.700	9.848	9.995	0.202	0.140	-0.543	0.255
0.800	9.856	9.993	0.199	0.141	-0.499	0.245
0.850	9.876	9.989	0.192	0.143	-0.393	0.224
0.900	9.909	9.985	0.179	0.145	-0.215	0.203
0.950	9.944	9.978	0.164	0.148	-0.019	0.163

(D) SECTION D

0.000	9.851	9.851	0.201	0.201	-0.529	-0.526
0.025	9.865	10.081	0.196	0.085	-0.453	0.726
0.050	9.858	9.898	0.199	0.183	-0.492	-0.273
0.075	9.857	9.940	0.199	0.166	-0.494	-0.044
0.100	9.858	9.988	0.199	0.143	-0.492	0.219
0.150	9.855	9.990	0.200	0.142	-0.507	0.231
0.200	9.847	9.996	0.202	0.139	-0.549	0.260
0.300	9.843	9.998	0.204	0.138	-0.572	0.275
0.500	9.852	10.001	0.201	0.136	-0.524	0.290
0.700	9.857	10.002	0.199	0.136	-0.496	0.296
0.800	9.886	10.000	0.188	0.137	-0.337	0.285
0.850	9.908	9.998	0.179	0.138	-0.217	0.273
0.900	9.932	9.992	0.169	0.141	-0.086	0.242
0.950	9.946	9.982	0.163	0.146	-0.012	0.187

TABLE 95.—VANE SURFACE STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE B
(READINGS 951 TO 954; AIRFLOW, 56.52 kg/sec)

(A) SECTION A

	PRESSURE, N/CM2		MACH NO		COEFFICIENT	
XC/C	SUCT	PRESS	SUCT	PRESS	SUCT	PRESS
0.000	9.842	9.842	0.204	0.204	0.396	0.396
0.025	9.642	9.732	0.267	0.241	-0.025	0.165
0.050	9.634	9.425	0.269	0.323	-0.040	-0.483
0.075	9.581	9.640	0.284	0.268	-0.154	-0.029
0.100	9.547	9.714	0.293	0.246	-0.225	0.128
0.150	9.486	9.739	0.308	0.238	-0.353	0.181
0.200	9.450	9.755	0.317	0.234	-0.429	0.213
0.300	9.402	9.762	0.329	0.231	-0.529	0.228
0.500	9.384	9.766	0.333	0.230	-0.568	0.236
0.700	9.380	9.765	0.334	0.230	-0.576	0.234
0.800	9.406	9.757	0.328	0.233	-0.522	0.218
0.850	9.434	9.753	0.321	0.234	-0.463	0.210
0.900	9.499	9.747	0.305	0.236	-0.326	0.196
0.950	9.643	9.752	0.267	0.234	-0.022	0.207

(B) SECTION B

0.000	9.712	9.713	0.247	0.246	0.124	0.125
0.025	9.533	9.853	0.296	0.200	-0.255	0.420
0.050	9.497	9.405	0.305	0.328	-0.330	-0.524
0.075	9.467	9.601	0.313	0.278	-0.394	-0.111
0.100	9.439	9.719	0.320	0.245	-0.453	0.138
0.150	9.400	9.741	0.329	0.238	-0.534	0.184
0.200	9.371	9.755	0.336	0.234	-0.596	0.213
0.300	9.364	9.764	0.338	0.231	-0.611	0.232
0.500	9.369	9.777	0.336	0.226	-0.600	0.260
0.700	9.376	9.766	0.335	0.230	-0.585	0.236
0.800	9.412	9.759	0.326	0.232	-0.509	0.222
0.850	9.476	9.748	0.311	0.236	-0.375	0.199
0.900	9.576	9.732	0.285	0.241	-0.164	0.164
0.950	9.607	9.713	0.277	0.247	-0.097	0.124

(C) SECTION C

0.000	9.700	9.699	0.250	0.251	0.098	0.096
0.025	9.535	9.849	0.296	0.202	-0.249	0.411
0.050	9.506	9.391	0.303	0.331	-0.312	-0.553
0.075	9.477	9.601	0.310	0.278	-0.371	-0.111
0.100	9.448	9.722	0.318	0.244	-0.434	0.144
0.150	9.408	9.741	0.327	0.238	-0.517	0.185
0.200	9.380	9.754	0.334	0.234	-0.576	0.212
0.300	9.374	9.761	0.335	0.231	-0.590	0.227
0.500	9.370	9.776	0.336	0.227	-0.598	0.258
0.700	9.386	9.769	0.332	0.229	-0.563	0.243
0.800	9.416	9.765	0.325	0.230	-0.500	0.234
0.850	9.468	9.753	0.313	0.234	-0.391	0.209
0.900	9.556	9.741	0.291	0.238	-0.206	0.185
0.950	9.630	9.720	0.271	0.244	-0.051	0.140

(D) SECTION D

0.000	9.354	9.354	0.340	0.340	-0.632	-0.631
0.025	9.380	9.981	0.334	0.147	-0.577	0.689
0.050	9.377	9.449	0.335	0.317	-0.584	-0.432
0.075	9.380	9.700	0.334	0.250	-0.576	0.098
0.100	9.382	9.718	0.333	0.245	-0.573	0.135
0.150	9.374	9.740	0.335	0.238	-0.590	0.183
0.200	9.351	9.756	0.341	0.233	-0.638	0.215
0.300	9.339	9.763	0.343	0.231	-0.663	0.232
0.500	9.362	9.772	0.338	0.228	-0.614	0.249
0.700	9.379	9.774	0.334	0.227	-0.579	0.254
0.800	9.468	9.769	0.313	0.229	-0.390	0.243
0.850	9.537	9.761	0.295	0.231	-0.246	0.227
0.900	9.598	9.745	0.279	0.236	-0.118	0.194
0.950	9.610	9.712	0.276	0.247	-0.091	0.123

TABLE 96.—VANE SURFACE STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE B
(READINGS 955 TO 958; AIRFLOW, 68.91 kg/sec)

(A) SECTION A

	PRESSURE, N/CM2		MACH NO		COEFFICIENT	
XC/C	SUCT	PRESS	SUCT	PRESS	SUCT	PRESS
0.000	9.688	9.688	0.254	0.254	0.397	0.397
0.025	9.374	9.499	0.335	0.305	-0.042	0.133
0.050	9.361	8.990	0.338	0.417	-0.059	-0.576
0.075	9.275	9.377	0.358	0.335	-0.178	-0.037
0.100	9.222	9.474	0.369	0.311	-0.253	0.098
0.150	9.125	9.514	0.390	0.301	-0.388	0.155
0.200	9.064	9.538	0.402	0.295	-0.473	0.188
0.300	8.992	9.550	0.417	0.292	-0.574	0.205
0.500	8.966	9.556	0.422	0.290	-0.610	0.213
0.700	8.959	9.553	0.423	0.291	-0.620	0.209
0.800	9.004	9.540	0.414	0.295	-0.557	0.191
0.850	9.056	9.535	0.404	0.296	-0.484	0.184
0.900	9.177	9.524	0.379	0.299	-0.315	0.168
0.950	9.386	9.532	0.332	0.297	-0.025	0.180

(B) SECTION B

0.000	9.485	9.486	0.308	0.308	0.115	0.115
0.025	9.219	9.685	0.370	0.255	-0.257	0.393
0.050	9.137	8.961	0.387	0.423	-0.372	-0.617
0.075	9.091	9.374	0.397	0.335	-0.435	-0.041
0.100	9.047	9.464	0.406	0.314	-0.496	0.085
0.150	8.981	9.504	0.419	0.304	-0.589	0.141
0.200	8.935	9.530	0.428	0.297	-0.654	0.177
0.300	8.926	9.544	0.429	0.293	-0.665	0.197
0.500	8.928	9.567	0.429	0.288	-0.662	0.228
0.700	8.938	9.549	0.427	0.292	-0.648	0.203
0.800	9.000	9.539	0.415	0.295	-0.563	0.189
0.850	9.106	9.520	0.394	0.300	-0.415	0.163
0.900	9.261	9.494	0.361	0.306	-0.199	0.126
0.950	9.303	9.463	0.351	0.314	-0.140	0.083

(C) SECTION C

0.000	9.461	9.463	0.315	0.314	0.080	0.083
0.025	9.197	9.676	0.374	0.257	-0.287	0.380
0.050	9.143	8.933	0.386	0.428	-0.363	-0.655
0.075	9.099	9.393	0.395	0.331	-0.424	-0.015
0.100	9.050	9.465	0.405	0.313	-0.492	0.087
0.150	8.987	9.507	0.418	0.303	-0.581	0.144
0.200	8.942	9.528	0.426	0.298	-0.644	0.173
0.300	8.929	9.540	0.429	0.294	-0.662	0.191
0.500	8.923	9.563	0.430	0.289	-0.669	0.223
0.700	8.950	9.554	0.425	0.291	-0.632	0.210
0.800	9.001	9.546	0.415	0.293	-0.561	0.199
0.850	9.086	9.527	0.398	0.298	-0.443	0.173
0.900	9.225	9.509	0.368	0.303	-0.248	0.147
0.950	9.327	9.473	0.346	0.311	-0.107	0.097

(D) SECTION D

0.000	8.959	8.959	0.423	0.423	-0.620	-0.619
0.025	8.952	9.873	0.424	0.193	-0.630	0.655
0.050	8.943	8.971	0.426	0.421	-0.641	-0.603
0.075	8.947	9.401	0.425	0.329	-0.636	-0.004
0.100	8.947	9.457	0.425	0.315	-0.636	0.075
0.150	8.929	9.499	0.429	0.305	-0.661	0.133
0.200	8.888	9.525	0.437	0.298	-0.719	0.170
0.300	8.865	9.539	0.441	0.295	-0.751	0.189
0.500	8.904	9.553	0.434	0.291	-0.696	0.209
0.700	8.930	9.558	0.429	0.290	-0.660	0.215
0.800	9.078	9.550	0.399	0.292	-0.454	0.205
0.850	9.194	9.539	0.375	0.295	-0.291	0.189
0.900	9.284	9.511	0.356	0.302	-0.166	0.150
0.950	9.299	9.457	0.352	0.315	-0.146	0.075

TABLE 97.—VANE SURFACE STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE B
(READINGS 959 TO 962; AIRFLOW, 73.42 kg/sec)

(A) SECTION A

	PRESSURE, N/CM2		MACH NO		COEFFICIENT	
XC/C	SUCT	PRESS	SUCT	PRESS	SUCT	PRESS
0.000	9.620	9.620	0.273	0.273	0.397	0.397
0.025	9.245	9.390	0.364	0.331	-0.059	0.117
0.050	9.229	8.775	0.368	0.458	-0.080	-0.632
0.075	9.129	9.240	0.389	0.365	-0.201	-0.066
0.100	9.065	9.354	0.402	0.340	-0.279	0.074
0.150	8.949	9.403	0.425	0.329	-0.421	0.132
0.200	8.874	9.432	0.439	0.322	-0.511	0.168
0.300	8.790	9.445	0.455	0.318	-0.614	0.184
0.500	8.758	9.451	0.461	0.317	-0.652	0.191
0.700	8.748	9.448	0.463	0.318	-0.665	0.187
0.800	8.805	9.433	0.452	0.321	-0.596	0.169
0.850	8.870	9.426	0.440	0.323	-0.517	0.160
0.900	9.027	9.413	0.410	0.326	-0.325	0.144
0.950	9.255	9.423	0.362	0.324	-0.047	0.157

(B) SECTION B

0.000	9.380	9.381	0.334	0.334	0.105	0.106
0.025	9.053	9.600	0.404	0.279	-0.294	0.373
0.050	8.957	8.733	0.423	0.466	-0.411	-0.684
0.075	8.905	9.222	0.433	0.369	-0.474	-0.087
0.100	8.852	9.336	0.443	0.344	-0.538	0.051
0.150	8.774	9.389	0.458	0.332	-0.633	0.116
0.200	8.716	9.416	0.469	0.325	-0.703	0.149
0.300	8.703	9.433	0.471	0.321	-0.720	0.170
0.500	8.706	9.460	0.471	0.315	-0.716	0.203
0.700	8.717	9.440	0.469	0.320	-0.703	0.178
0.800	8.790	9.427	0.455	0.323	-0.613	0.162
0.850	8.919	9.405	0.431	0.328	-0.456	0.135
0.900	9.097	9.372	0.395	0.336	-0.239	0.095
0.950	9.148	9.335	0.385	0.344	-0.178	0.050

(C) SECTION C

0.000	9.349	9.348	0.341	0.341	0.067	0.066
0.025	9.030	9.590	0.409	0.281	-0.322	0.360
0.050	8.964	8.695	0.422	0.473	-0.402	-0.729
0.075	8.911	9.273	0.432	0.358	-0.466	-0.026
0.100	8.853	9.335	0.443	0.344	-0.537	0.050
0.150	8.775	9.387	0.458	0.332	-0.632	0.114
0.200	8.719	9.413	0.468	0.326	-0.700	0.145
0.300	8.705	9.429	0.471	0.322	-0.717	0.164
0.500	8.699	9.457	0.472	0.315	-0.724	0.198
0.700	8.731	9.445	0.466	0.318	-0.686	0.184
0.800	8.793	9.435	0.455	0.321	-0.610	0.172
0.850	8.896	9.413	0.435	0.326	-0.484	0.144
0.900	9.063	9.389	0.402	0.332	-0.282	0.115
0.950	9.172	9.348	0.380	0.341	-0.149	0.066

(D) SECTION D

0.000	8.783	8.786	0.457	0.456	-0.623	-0.619
0.025	8.746	9.823	0.463	0.211	-0.668	0.644
0.050	8.735	8.742	0.465	0.464	-0.681	-0.673
0.075	8.737	9.264	0.465	0.360	-0.678	-0.037
0.100	8.736	9.330	0.465	0.345	-0.680	0.044
0.150	8.713	9.380	0.469	0.334	-0.707	0.105
0.200	8.661	9.410	0.479	0.327	-0.770	0.142
0.300	8.632	9.427	0.484	0.323	-0.806	0.162
0.500	8.679	9.445	0.476	0.318	-0.749	0.183
0.700	8.710	9.450	0.470	0.317	-0.711	0.190
0.800	8.889	9.441	0.436	0.319	-0.493	0.179
0.850	9.029	9.428	0.409	0.322	-0.322	0.163
0.900	9.129	9.395	0.389	0.330	-0.201	0.123
0.950	9.140	9.329	0.387	0.346	-0.188	0.043

TABLE 98.—VANE SURFACE STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE B
(READINGS 963 TO 966; AIRFLOW, 75.56 kg/sec)

(A) SECTION A

	PRESSURE, N/CM2		MACH NO		COEFFICIENT	
XC/C	SUCT	PRESS	SUCT	PRESS	SUCT	PRESS
0.000	9.600	9.601	0.279	0.279	0.411	0.411
0.025	9.204	9.355	0.373	0.340	-0.043	0.129
0.050	9.185	8.704	0.377	0.471	-0.065	-0.617
0.075	9.080	9.195	0.399	0.375	-0.186	-0.054
0.100	9.013	9.314	0.412	0.349	-0.263	0.083
0.150	8.890	9.366	0.436	0.337	-0.404	0.143
0.200	8.811	9.396	0.451	0.330	-0.494	0.177
0.300	8.722	9.411	0.468	0.326	-0.596	0.194
0.500	8.689	9.414	0.474	0.326	-0.634	0.198
0.700	8.679	9.413	0.475	0.326	-0.645	0.196
0.800	8.738	9.397	0.465	0.330	-0.577	0.178
0.850	8.811	9.389	0.451	0.332	-0.494	0.169
0.900	8.976	9.376	0.420	0.335	-0.304	0.154
0.950	9.211	9.388	0.372	0.332	-0.036	0.168

(B) SECTION B

0.000	9.343	9.343	0.342	0.342	0.116	0.116
0.025	8.996	9.573	0.416	0.286	-0.282	0.380
0.050	8.895	8.656	0.435	0.480	-0.398	-0.672
0.075	8.843	9.185	0.445	0.377	-0.458	-0.065
0.100	8.787	9.294	0.456	0.353	-0.522	0.060
0.150	8.707	9.350	0.470	0.341	-0.614	0.124
0.200	8.645	9.376	0.482	0.335	-0.685	0.153
0.300	8.628	9.397	0.485	0.330	-0.704	0.178
0.500	8.633	9.424	0.484	0.323	-0.699	0.209
0.700	8.646	9.403	0.481	0.328	-0.683	0.185
0.800	8.720	9.387	0.468	0.332	-0.598	0.167
0.850	8.856	9.367	0.443	0.337	-0.442	0.143
0.900	9.042	9.333	0.407	0.345	-0.230	0.104
0.950	9.097	9.295	0.396	0.353	-0.167	0.061

(C) SECTION C

0.000	9.314	9.313	0.349	0.349	0.083	0.082
0.025	8.975	9.562	0.420	0.289	-0.306	0.367
0.050	8.905	8.616	0.433	0.487	-0.386	-0.718
0.075	8.850	9.230	0.444	0.367	-0.449	-0.013
0.100	8.790	9.294	0.455	0.353	-0.519	0.059
0.150	8.706	9.348	0.471	0.341	-0.615	0.122
0.200	8.648	9.376	0.481	0.335	-0.682	0.154
0.300	8.632	9.392	0.484	0.331	-0.699	0.173
0.500	8.627	9.422	0.485	0.324	-0.705	0.206
0.700	8.660	9.410	0.479	0.327	-0.668	0.192
0.800	8.726	9.400	0.467	0.329	-0.591	0.181
0.850	8.837	9.377	0.446	0.335	-0.464	0.155
0.900	9.014	9.353	0.412	0.340	-0.261	0.127
0.950	9.121	9.308	0.390	0.350	-0.138	0.076

(D) SECTION D

0.000	8.734	8.734	0.465	0.466	-0.582	-0.583
0.025	8.681	9.807	0.475	0.216	-0.643	0.648
0.050	8.669	8.664	0.477	0.478	-0.656	-0.662
0.075	8.671	9.219	0.477	0.370	-0.654	-0.027
0.100	8.669	9.288	0.477	0.355	-0.657	0.053
0.150	8.644	9.342	0.482	0.343	-0.685	0.114
0.200	8.589	9.374	0.492	0.335	-0.749	0.151
0.300	8.558	9.391	0.497	0.331	-0.784	0.171
0.500	8.606	9.409	0.489	0.327	-0.729	0.192
0.700	8.638	9.415	0.483	0.326	-0.692	0.198
0.800	8.826	9.406	0.449	0.328	-0.477	0.188
0.850	8.974	9.392	0.420	0.331	-0.307	0.172
0.900	9.078	9.358	0.399	0.339	-0.188	0.133
0.950	9.089	9.288	0.397	0.355	-0.176	0.053

TABLE 99.—VANE SURFACE STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE B
(READINGS 967 TO 970; AIRFLOW, 78.89 kg/sec)

(A) SECTION A

	PRESSURE, N/CM2		MACH NO		COEFFICIENT	
XC/C	SUCT	PRESS	SUCT	PRESS	SUCT	PRESS
0.000	9.552	9.552	0.291	0.291	0.418	0.418
0.025	9.109	9.273	0.393	0.358	-0.046	0.125
0.050	9.086	8.534	0.398	0.501	-0.070	-0.647
0.075	8.971	9.094	0.421	0.396	-0.190	-0.062
0.100	8.896	9.224	0.435	0.369	-0.268	0.074
0.150	8.758	9.279	0.461	0.357	-0.413	0.132
0.200	8.668	9.315	0.478	0.349	-0.507	0.170
0.300	8.571	9.331	0.495	0.345	-0.609	0.186
0.500	8.534	9.338	0.501	0.343	-0.647	0.193
0.700	8.521	9.333	0.504	0.345	-0.661	0.188
0.800	8.587	9.315	0.492	0.349	-0.592	0.169
0.850	8.670	9.306	0.477	0.351	-0.505	0.160
0.900	8.861	9.291	0.442	0.354	-0.305	0.144
0.950	9.108	9.305	0.393	0.351	-0.047	0.159

(B) SECTION B

0.000	9.266	9.266	0.360	0.360	0.118	0.118
0.025	8.876	9.511	0.439	0.302	-0.289	0.374
0.050	8.766	8.481	0.460	0.511	-0.405	-0.703
0.075	8.704	9.080	0.471	0.399	-0.469	-0.076
0.100	8.642	9.197	0.482	0.375	-0.534	0.046
0.150	8.551	9.261	0.498	0.361	-0.629	0.112
0.200	8.480	9.293	0.511	0.354	-0.703	0.146
0.300	8.462	9.313	0.514	0.349	-0.723	0.168
0.500	8.467	9.345	0.513	0.342	-0.717	0.201
0.700	8.480	9.321	0.511	0.347	-0.703	0.175
0.800	8.565	9.307	0.496	0.350	-0.615	0.161
0.850	8.718	9.281	0.469	0.356	-0.455	0.134
0.900	8.918	9.242	0.431	0.365	-0.245	0.094
0.950	8.980	9.199	0.419	0.374	-0.181	0.048

(C) SECTION C

0.000	9.231	9.230	0.367	0.367	0.082	0.081
0.025	8.849	9.502	0.444	0.304	-0.318	0.365
0.050	8.772	8.435	0.458	0.519	-0.398	-0.750
0.075	8.711	9.128	0.470	0.389	-0.462	-0.026
0.100	8.641	9.196	0.482	0.375	-0.535	0.045
0.150	8.549	9.259	0.499	0.361	-0.631	0.111
0.200	8.482	9.290	0.510	0.354	-0.702	0.143
0.300	8.465	9.309	0.513	0.350	-0.720	0.163
0.500	8.459	9.342	0.514	0.343	-0.725	0.197
0.700	8.495	9.328	0.508	0.346	-0.688	0.183
0.800	8.571	9.317	0.495	0.348	-0.608	0.172
0.850	8.695	9.291	0.473	0.354	-0.479	0.145
0.900	8.891	9.265	0.436	0.360	-0.274	0.117
0.950	9.006	9.215	0.414	0.371	-0.154	0.065

(D) SECTION D

0.000	8.620	8.617	0.486	0.487	-0.557	-0.561
0.025	8.541	9.780	0.500	0.225	-0.640	0.656
0.050	8.528	8.518	0.502	0.504	-0.654	-0.664
0.075	8.528	9.123	0.502	0.390	-0.653	-0.031
0.100	8.527	9.205	0.502	0.373	-0.654	0.054
0.150	8.500	9.264	0.507	0.360	-0.682	0.116
0.200	8.440	9.300	0.518	0.352	-0.745	0.154
0.300	8.406	9.318	0.524	0.348	-0.781	0.173
0.500	8.457	9.335	0.515	0.344	-0.728	0.190
0.700	8.487	9.342	0.510	0.343	-0.697	0.197
0.800	8.698	9.332	0.472	0.345	-0.476	0.187
0.850	8.866	9.317	0.441	0.348	-0.300	0.171
0.900	8.972	9.278	0.420	0.357	-0.189	0.130
0.950	8.983	9.200	0.418	0.374	-0.177	0.049

TABLE 100.—VANE SURFACE STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE B
(READINGS 971 TO 974; AIRFLOW, 81.77 kg/sec)

(A) SECTION A

	PRESSURE, N/CM2		MACH NO		COEFFICIENT	
XC/C	SUCT	PRESS	SUCT	PRESS	SUCT	PRESS
0.000	9.528	9.528	0.298	0.298	0.437	0.437
0.025	9.061	9.235	0.403	0.366	-0.016	0.152
0.050	9.034	8.446	0.408	0.517	-0.042	-0.612
0.075	8.915	9.042	0.432	0.407	-0.157	-0.034
0.100	8.835	9.179	0.447	0.378	-0.235	0.098
0.150	8.691	9.240	0.473	0.365	-0.375	0.157
0.200	8.595	9.275	0.491	0.358	-0.468	0.192
0.300	8.494	9.291	0.508	0.354	-0.566	0.208
0.500	8.454	9.297	0.515	0.353	-0.605	0.213
0.700	8.439	9.293	0.518	0.354	-0.619	0.209
0.800	8.511	9.273	0.505	0.358	-0.549	0.190
0.850	8.602	9.264	0.489	0.360	-0.461	0.181
0.900	8.806	9.244	0.452	0.364	-0.263	0.162
0.950	9.056	9.253	0.404	0.362	-0.020	0.171

(B) SECTION B

0.000	9.226	9.226	0.368	0.368	0.145	0.144
0.025	8.811	9.477	0.451	0.310	-0.258	0.388
0.050	8.697	8.391	0.472	0.526	-0.369	-0.666
0.075	8.633	9.023	0.484	0.410	-0.431	-0.053
0.100	8.566	9.145	0.496	0.386	-0.496	0.065
0.150	8.470	9.214	0.512	0.371	-0.589	0.132
0.200	8.395	9.248	0.525	0.364	-0.662	0.165
0.300	8.375	9.269	0.529	0.359	-0.681	0.186
0.500	8.381	9.302	0.528	0.352	-0.675	0.218
0.700	8.393	9.277	0.526	0.357	-0.664	0.193
0.800	8.485	9.263	0.510	0.360	-0.574	0.180
0.850	8.646	9.235	0.481	0.366	-0.418	0.153
0.900	8.855	9.195	0.443	0.375	-0.216	0.114
0.950	8.917	9.148	0.431	0.385	-0.156	0.068

(C) SECTION C

0.000	9.187	9.187	0.377	0.377	0.107	0.106
0.025	8.784	9.468	0.456	0.313	-0.285	0.379
0.050	8.704	8.341	0.471	0.535	-0.363	-0.714
0.075	8.637	9.075	0.483	0.400	-0.427	-0.002
0.100	8.566	9.144	0.496	0.386	-0.496	0.065
0.150	8.468	9.212	0.513	0.371	-0.591	0.130
0.200	8.396	9.245	0.525	0.364	-0.661	0.162
0.300	8.378	9.264	0.528	0.360	-0.679	0.181
0.500	8.372	9.300	0.529	0.352	-0.684	0.215
0.700	8.412	9.284	0.523	0.356	-0.646	0.200
0.800	8.490	9.274	0.509	0.358	-0.570	0.191
0.850	8.624	9.246	0.485	0.364	-0.440	0.163
0.900	8.830	9.220	0.448	0.370	-0.240	0.138
0.950	8.944	9.166	0.426	0.381	-0.130	0.086

(D) SECTION D

0.000	8.576	8.576	0.494	0.494	-0.487	-0.487
0.025	8.475	9.769	0.512	0.229	-0.584	0.671
0.050	8.460	8.459	0.514	0.514	-0.599	-0.600
0.075	8.463	9.084	0.514	0.398	-0.596	0.006
0.100	8.461	9.168	0.514	0.381	-0.598	0.087
0.150	8.433	9.229	0.519	0.368	-0.625	0.147
0.200	8.371	9.265	0.529	0.360	-0.685	0.182
0.300	8.336	9.284	0.535	0.356	-0.719	0.201
0.500	8.384	9.303	0.527	0.351	-0.672	0.219
0.700	8.411	9.306	0.523	0.351	-0.646	0.221
0.800	8.634	9.294	0.484	0.353	-0.430	0.210
0.850	8.808	9.278	0.452	0.357	-0.261	0.195
0.900	8.916	9.233	0.431	0.367	-0.157	0.151
0.950	8.931	9.151	0.428	0.384	-0.142	0.072

TABLE 101.—VANE SURFACE STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A10 WITH SCOOP (READINGS 12A TO 15A; AIRFLOW, 73.10 kg/sec)

(A) SECTION A

	PRESSURE, N/CM2		MACH NO		COEFFICIENT	
XC/C	SUCT	PRESS	SUCT	PRESS	SUCT	PRESS
0.000	9.667	9.668	0.260	0.260	0.600	0.601
0.025	9.164	9.343	0.382	0.342	0.121	0.292
0.050	9.040	9.426	0.407	0.323	0.003	0.371
0.075	8.969	9.523	0.421	0.299	-0.063	0.463
0.100	8.914	9.606	0.432	0.277	-0.116	0.541
0.150	8.832	9.671	0.447	0.259	-0.194	0.604
0.200	8.801	9.707	0.453	0.248	-0.223	0.638
0.300	8.860	9.757	0.442	0.233	-0.167	0.685
0.500	9.244	9.783	0.364	0.224	0.198	0.710
0.700	9.542	9.774	0.294	0.227	0.481	0.701
0.800	9.638	9.753	0.268	0.234	0.572	0.682
0.850	9.679	9.737	0.256	0.239	0.612	0.666
0.900	9.715	9.709	0.246	0.248	0.646	0.640
0.950	9.741	9.671	0.238	0.259	0.670	0.603

(B) SECTION B

0.000	9.644	9.645	0.267	0.266	0.578	0.579
0.025	8.435	7.379	0.519	0.689	-0.572	-1.575
0.050	8.085	7.750	0.577	0.631	-0.905	-1.223
0.075	7.761	8.526	0.629	0.503	-1.212	-0.485
0.100	7.511	8.713	0.668	0.469	-1.450	-0.307
0.150	7.176	8.953	0.720	0.424	-1.768	-0.079
0.200	7.095	9.092	0.732	0.396	-1.845	0.053
0.300	7.169	9.238	0.721	0.366	-1.775	0.192
0.500	8.005	10.253	0.590	0.130	-0.980	1.157
0.700	8.560	9.272	0.497	0.358	-0.452	0.224
0.800	8.703	9.179	0.471	0.378	-0.316	0.136
0.850	8.751	9.119	0.462	0.391	-0.271	0.078
0.900	8.788	9.025	0.456	0.410	-0.236	-0.010
0.950	8.794	8.892	0.454	0.436	-0.230	-0.137

(C) SECTION D

0.000	8.425	8.426	0.520	0.520	-0.581	-0.580
0.025	8.033	9.724	0.586	0.243	-0.954	0.654
0.050	7.986	9.423	0.593	0.324	-0.998	0.368
0.075	7.970	9.438	0.596	0.320	-1.013	0.383
0.100	8.006	9.461	0.590	0.315	-0.980	0.404
0.150	8.062	9.521	0.581	0.299	-0.926	0.461
0.200	8.139	9.567	0.568	0.288	-0.853	0.505
0.300	8.291	9.646	0.543	0.266	-0.709	0.580
0.500	8.720	9.654	0.468	0.264	-0.300	0.588
0.700	9.019	9.582	0.411	0.283	-0.016	0.519
0.800	9.095	9.510	0.396	0.302	0.056	0.450
0.850	9.118	9.451	0.391	0.317	0.078	0.394
0.900	9.131	9.370	0.388	0.336	0.090	0.317
0.950	9.126	9.253	0.390	0.362	0.085	0.206

TABLE 102.—VANE SURFACE STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A10 WITH SCOOP (READINGS 16A TO 19A; AIRFLOW, 74.88 kg/sec)

(A) SECTION A

	PRESSURE, N/CM2		MACH NO		COEFFICIENT	
XC/C	SUCT	PRESS	SUCT	PRESS	SUCT	PRESS
0.000	9.646	9.647	0.266	0.266	0.606	0.606
0.025	9.118	9.303	0.391	0.351	0.128	0.296
0.050	8.987	9.389	0.417	0.332	0.010	0.373
0.075	8.913	9.492	0.432	0.307	-0.057	0.467
0.100	8.854	9.579	0.443	0.284	-0.109	0.545
0.150	8.766	9.648	0.460	0.265	-0.189	0.607
0.200	8.735	9.685	0.465	0.255	-0.217	0.641
0.300	8.800	9.738	0.453	0.239	-0.158	0.689
0.500	9.199	9.767	0.374	0.230	0.201	0.715
0.700	9.514	9.757	0.301	0.233	0.486	0.706
0.800	9.614	9.735	0.275	0.240	0.577	0.686
0.850	9.656	9.717	0.263	0.245	0.615	0.670
0.900	9.694	9.688	0.252	0.254	0.649	0.644
0.950	9.722	9.647	0.244	0.266	0.674	0.607

(B) SECTION B

0.000	9.623	9.620	0.272	0.273	0.585	0.582
0.025	8.353	7.205	0.533	0.715	-0.563	-1.599
0.050	7.986	7.597	0.593	0.655	-0.894	-1.245
0.075	7.645	8.426	0.647	0.520	-1.202	-0.497
0.100	7.374	8.628	0.689	0.485	-1.447	-0.314
0.150	7.024	8.882	0.743	0.438	-1.763	-0.084
0.200	6.930	9.031	0.757	0.409	-1.848	0.050
0.300	7.016	9.186	0.744	0.377	-1.770	0.190
0.500	7.898	10.259	0.607	0.133	-0.973	1.159
0.700	8.478	9.224	0.511	0.369	-0.450	0.224
0.800	8.628	9.128	0.485	0.389	-0.314	0.137
0.850	8.678	9.063	0.476	0.402	-0.269	0.079
0.900	8.717	8.966	0.469	0.422	-0.233	-0.009
0.950	8.724	8.827	0.467	0.448	-0.227	-0.135

(C) SECTION D

0.000	8.347	8.347	0.534	0.534	-0.568	-0.568
0.025	7.931	9.703	0.602	0.249	-0.944	0.657
0.050	7.883	9.387	0.610	0.332	-0.987	0.371
0.075	7.866	9.405	0.612	0.328	-1.002	0.388
0.100	7.904	9.427	0.606	0.323	-0.968	0.408
0.150	7.965	9.491	0.597	0.307	-0.913	0.466
0.200	8.045	9.540	0.584	0.295	-0.841	0.510
0.300	8.206	9.623	0.557	0.272	-0.696	0.585
0.500	8.655	9.632	0.480	0.270	-0.290	0.593
0.700	8.966	9.556	0.422	0.290	-0.009	0.525
0.800	9.045	9.480	0.406	0.310	0.063	0.456
0.850	9.066	9.418	0.402	0.325	0.082	0.399
0.900	9.083	9.333	0.398	0.345	0.097	0.322
0.950	9.077	9.210	0.399	0.372	0.092	0.212

TABLE 103.—VANE SURFACE STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A10 WITH SCOOP (READINGS 20A TO 24A; AIRFLOW, 78.32 kg/sec)

(A) SECTION A

	PRESSURE, N/CM2		MACH NO		COEFFICIENT	
XC/C	SUCT	PRESS	SUCT	PRESS	SUCT	PRESS
0.000	9.597	9.598	0.279	0.279	0.612	0.612
0.025	9.008	9.203	0.413	0.373	0.129	0.289
0.050	8.860	9.301	0.442	0.352	0.008	0.369
0.075	8.777	9.413	0.458	0.326	-0.060	0.461
0.100	8.712	9.515	0.470	0.301	-0.113	0.545
0.150	8.613	9.592	0.487	0.281	-0.194	0.608
0.200	8.577	9.634	0.494	0.269	-0.224	0.642
0.300	8.653	9.693	0.480	0.252	-0.162	0.691
0.500	9.094	9.725	0.396	0.243	0.200	0.717
0.700	9.446	9.714	0.318	0.246	0.489	0.708
0.800	9.557	9.689	0.290	0.253	0.579	0.687
0.850	9.603	9.671	0.278	0.259	0.617	0.672
0.900	9.644	9.638	0.266	0.268	0.651	0.646
0.950	9.675	9.593	0.258	0.281	0.676	0.608

(B) SECTION B

0.000	9.579	9.580	0.284	0.284	0.597	0.598
0.025	8.166	6.751	0.564	0.784	-0.560	-1.719
0.050	7.746	7.200	0.631	0.716	-0.904	-1.352
0.075	7.355	8.176	0.692	0.562	-1.224	-0.552
0.100	7.041	8.412	0.740	0.522	-1.482	-0.359
0.150	6.607	8.707	0.806	0.470	-1.837	-0.117
0.200	6.504	8.877	0.822	0.439	-1.922	0.022
0.300	6.618	9.056	0.804	0.404	-1.828	0.169
0.500	7.630	10.272	0.650	0.140	-0.999	1.164
0.700	8.276	9.109	0.545	0.393	-0.470	0.212
0.800	8.445	9.001	0.517	0.415	-0.332	0.124
0.850	8.501	8.931	0.507	0.428	-0.286	0.066
0.900	8.544	8.820	0.500	0.450	-0.250	-0.025
0.950	8.553	8.665	0.498	0.478	-0.243	-0.152

(C) SECTION D

0.000	8.164	8.163	0.564	0.564	-0.562	-0.562
0.025	7.688	9.647	0.641	0.266	-0.952	0.653
0.050	7.633	9.296	0.649	0.353	-0.997	0.365
0.075	7.618	9.317	0.652	0.348	-1.009	0.383
0.100	7.662	9.345	0.645	0.342	-0.973	0.405
0.150	7.732	9.417	0.634	0.325	-0.916	0.464
0.200	7.824	9.471	0.619	0.312	-0.841	0.509
0.300	8.003	9.564	0.590	0.288	-0.694	0.585
0.500	8.497	9.575	0.508	0.285	-0.289	0.594
0.700	8.839	9.493	0.446	0.307	-0.009	0.527
0.800	8.926	9.408	0.429	0.327	0.062	0.457
0.850	8.953	9.338	0.424	0.343	0.084	0.400
0.900	8.967	9.244	0.421	0.364	0.096	0.322
0.950	8.963	9.108	0.422	0.393	0.093	0.211

TABLE 104.—VANE SURFACE STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A10 WITH SCOOP (READINGS 25A TO 28A; AIRFLOW, 35.46 kg/sec)

(A) SECTION A

	PRESSURE, N/CM2		MACH NO		COEFFICIENT	
XC/C	SUCT	PRESS	SUCT	PRESS	SUCT	PRESS
0.000	10.032	10.033	0.119	0.119	0.582	0.583
0.025	9.936	9.988	0.168	0.143	0.170	0.394
0.050	9.913	10.000	0.177	0.137	0.074	0.445
0.075	9.900	10.014	0.182	0.129	0.018	0.506
0.100	9.890	10.028	0.186	0.122	-0.025	0.564
0.150	9.875	10.042	0.192	0.113	-0.087	0.624
0.200	9.872	10.048	0.193	0.109	-0.102	0.651
0.300	9.881	10.057	0.190	0.103	-0.061	0.688
0.500	9.962	10.062	0.156	0.100	0.282	0.709
0.700	10.015	10.060	0.129	0.101	0.509	0.701
0.800	10.034	10.053	0.118	0.106	0.588	0.672
0.850	10.042	10.053	0.113	0.106	0.622	0.671
0.900	10.049	10.048	0.109	0.109	0.653	0.648
0.950	10.054	10.041	0.106	0.114	0.673	0.617

(B) SECTION B

0.000	10.024	10.025	0.124	0.123	0.548	0.550
0.025	9.791	9.678	0.222	0.257	-0.445	-0.928
0.050	9.730	9.755	0.241	0.234	-0.706	-0.602
0.075	9.673	9.850	0.258	0.201	-0.948	-0.197
0.100	9.635	9.894	0.269	0.185	-1.109	-0.005
0.150	9.585	9.925	0.283	0.172	-1.323	0.127
0.200	9.567	9.945	0.287	0.163	-1.399	0.211
0.300	9.575	9.972	0.286	0.151	-1.369	0.327
0.500	9.724	10.157	0.243	0.059	-0.731	1.114
0.700	9.834	9.973	0.207	0.150	-0.261	0.331
0.800	9.863	9.954	0.197	0.159	-0.141	0.250
0.850	9.872	9.942	0.193	0.165	-0.102	0.197
0.900	9.880	9.925	0.190	0.172	-0.068	0.125
0.950	9.880	9.900	0.190	0.182	-0.069	0.020

(C) SECTION D

0.000	9.789	9.789	0.222	0.222	-0.455	-0.454
0.025	9.719	10.054	0.245	0.105	-0.755	0.677
0.050	9.708	9.994	0.248	0.140	-0.800	0.420
0.075	9.702	9.996	0.250	0.139	-0.825	0.427
0.100	9.706	10.000	0.249	0.137	-0.810	0.446
0.150	9.712	10.011	0.247	0.131	-0.782	0.490
0.200	9.724	10.019	0.243	0.127	-0.733	0.527
0.300	9.749	10.031	0.235	0.120	-0.625	0.575
0.500	9.842	10.035	0.204	0.117	-0.230	0.595
0.700	9.906	10.020	0.180	0.126	0.044	0.530
0.800	9.922	10.005	0.173	0.134	0.114	0.466
0.850	9.928	9.993	0.171	0.141	0.136	0.416
0.900	9.930	9.978	0.170	0.148	0.148	0.350
0.950	9.931	9.955	0.170	0.159	0.149	0.252

TABLE 105.—VANE SURFACE STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A10 WITH SCOOP (READINGS 29A TO 32A; AIRFLOW, 56.42 kg/sec)

(A) SECTION A

	PRESSURE, N/CM2		MACH NO		COEFFICIENT	
XC/C	SUCT	PRESS	SUCT	PRESS	SUCT	PRESS
0.000	9.877	9.877	0.191	0.191	0.601	0.601
0.025	9.615	9.731	0.275	0.241	0.169	0.360
0.050	9.551	9.770	0.292	0.229	0.063	0.425
0.075	9.515	9.812	0.301	0.215	0.005	0.495
0.100	9.487	9.858	0.308	0.198	-0.042	0.570
0.150	9.445	9.892	0.318	0.185	-0.111	0.626
0.200	9.433	9.910	0.321	0.178	-0.131	0.656
0.300	9.465	9.934	0.313	0.168	-0.078	0.696
0.500	9.665	9.949	0.260	0.162	0.252	0.720
0.700	9.820	9.944	0.212	0.164	0.508	0.712
0.800	9.871	9.933	0.193	0.169	0.592	0.693
0.850	9.893	9.924	0.185	0.173	0.628	0.679
0.900	9.912	9.910	0.178	0.178	0.659	0.656
0.950	9.926	9.890	0.172	0.186	0.682	0.623

(B) SECTION B

0.000	9.855	9.856	0.199	0.199	0.566	0.567
0.025	9.222	8.823	0.369	0.449	-0.480	-1.137
0.050	9.052	9.020	0.405	0.411	-0.761	-0.813
0.075	8.890	9.384	0.436	0.333	-1.027	-0.212
0.100	8.780	9.447	0.457	0.318	-1.208	-0.108
0.150	8.635	9.555	0.484	0.291	-1.449	0.070
0.200	8 588	9.621	0.492	0.273	-1.525	0.178
0.300	8.611	9.689	0.488	0.253	-1.487	0.292
0.500	9.027	10.197	0.410	0.096	-0.801	1.130
0.700	9.323	9.698	0.347	0.251	-0.312	0.305
0.800	9.399	9.646	0.329	0.266	-0.186	0.221
0.850	9.425	9.615	0.323	0.275	-0.144	0.170
0.900	9.444	9.567	0.319	0.287	-0.114	0.090
0.950	9.443	9.500	0.319	0.305	-0.115	-0.020

(C) SECTION D

0.000	9.216	9.217	0.371	0.370	-0.490	-0.488
0.025	9.021	9.927	0.411	0.171	-0.811	0.685
0.050	8.994	9.765	0.416	0.230	-0.855	0.417
0.075	8.982	9.771	0.419	0.228	-0.876	0.426
0.100	8.995	9.782	0.416	0.225	-0.854	0.445
0.150	9.018	9.812	0.411	0.215	-0.816	0.494
0.200	9.054	9.835	0.404	0.207	-0.757	0.532
0.300	9.130	9.874	0.389	0.192	-0.631	0.597
0.500	9.369	9.878	0.336	0.191	-0.237	0.603
0.700	9.536	9.839	0.296	0.205	0.039	0.538
0.800	9.578	9.800	0.285	0.219	0.108	0.474
0.850	9.591	9.768	0.281	0.229	0.130	0.422
0.900	9.599	9.726	0.279	0.243	0.142	0.352
0.950	9.598	9.664	0.279	0.261	0.141	0.250

TABLE 106.—VANE SURFACE STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A10 WITH SCOOP (READINGS 33A TO 36A; AIRFLOW, 68.73 kg/sec)

(A) SECTION A

	PRESSURE, N/CM2		MACH NO		COEFFICIENT	
XC/C	SUCT	PRESS	SUCT	PRESS	SUCT	PRESS
0.000	9.732	9.732	0.241	0.241	0.601	0.601
0.025	9.314	9.475	0.349	0.311	0.145	0.321
0.050	9.210	9.542	0.372	0.294	0.032	0.393
0.075	9.152	9.622	0.384	0.273	-0.031	0.480
0.100	9.106	9.691	0.394	0.253	-0.081	0.556
0.150	9.038	9.745	0.407	0.236	-0.155	0.615
0.200	9.014	9.775	0.412	0.227	-0.182	0.647
0.300	9.066	9.816	0.402	0.213	-0.125	0.691
0.500	9.385	9.838	0.333	0.206	0.223	0.716
0.700	9.633	9.831	0.270	0.208	0.492	0.708
0.800	9.715	9.813	0.246	0.214	0.582	0.688
0.850	9.750	9.798	0.235	0.219	0.621	0.673
0.900	9.781	9.776	0.225	0.227	0.653	0.649
0.950	9.803	9.744	0.218	0.237	0.677	0.613

(B) SECTION B

0.000	9.710	9.711	0.247	0.247	0.577	0.577
0.025	8.692	7.906	0.473	0.606	-0.532	-1.388
0.050	8.410	8.212	0.523	0.556	-0.839	-1.055
0.075	8.143	8.834	0.568	0.447	-1.130	-0.377
0.100	7.948	8.978	0.599	0.419	-1.342	-0.221
0.150	7.692	9.169	0.640	0.380	-1.621	-0.013
0.200	7.626	9.281	0.650	0.356	-1.693	0.109
0.300	7.678	9.397	0.642	0.330	-1.636	0.236
0.500	8.356	10.235	0.532	0.120	-0.898	1.148
0.700	8.822	9.420	0.449	0.324	-0.390	0.261
0.800	8.942	9.339	0.426	0.343	-0.259	0.173
0.850	8.983	9.290	0.418	0.354	-0.215	0.119
0.900	9.013	9.213	0.412	0.371	-0.182	0.036
0.950	9.018	9.103	0.411	0.394	-0.177	-0.085

(C) SECTION D

0.000	8.688	8.689	0.474	0.474	-0.536	-0.536
0.025	8.365	9.797	0.531	0.220	-0.888	0.671
0.050	8.327	9.541	0.537	0.294	-0.929	0.392
0.075	8.313	9.552	0.539	0.291	-0.945	0.405
0.100	8.338	9.571	0.535	0.287	-0.917	0.425
0.150	8.383	9.616	0.527	0.274	-0.868	0.475
0.200	8.446	9.657	0.517	0.263	-0.800	0.519
0.300	8.570	9.724	0.495	0.243	-0.665	0.592
0.500	8.936	9.729	0.427	0.241	-0.266	0.597
0.700	9.191	9.668	0.376	0.260	0.012	0.531
0.800	9.256	9.606	0.362	0.277	0.082	0.464
0.850	9.276	9.556	0.357	0.291	0.104	0.408
0.900	9.287	9.488	0.355	0.308	0.116	0.335
0.950	9.284	9.390	0.356	0.331	0.113	0.228

TABLE 107.—VANE SURFACE STATIC PRESSURE DISTRIBUTION FOR CORNER 1 WITH VANE A10 WITH SCOOP (READINGS 37A TO 40A; AIRFLOW, 81.33 kg/sec)

(A) SECTION A

	PRESSURE, N/CM2		MACH NO		COEFFICIENT	
XC/C	SUCT	PRESS	SUCT	PRESS	SUCT	PRESS
0.000	9.574	9.574	0.286	0.286	0.632	0.632
0.025	8.955	9.156	0.424	0.383	0.162	0.315
0.050	8.801	9.258	0.453	0.361	0.045	0.392
0.075	8.713	9.381	0.469	0.334	-0.021	0.485
0.100	8.644	9.484	0.482	0.309	-0.074	0.563
0.150	8.542	9.565	0.500	0.288	-0.151	0.625
0.200	8.501	9.610	0.507	0.276	-0.182	0.659
0.300	8.581	9.669	0.493	0.259	-0.121	0.704
0.500	9.045	9.706	0.406	0.249	0.230	0.732
0.700	9.413	9.695	0.326	0.252	0.509	0.723
0.800	9.529	9.669	0.297	0.259	0.598	0.703
0.850	9.578	9.649	0.285	0.265	0.635	0.688
0.900	9.621	9.616	0.273	0.274	0.667	0.663
0.950	9.654	9.567	0.264	0.287	0.692	0.627

(B) SECTION B

0.000	9.559	9.560	0.290	0.289	0.620	0.621
0.025	8.077	6.551	0.578	0.815	-0.504	-1.661
0.050	7.636	7.083	0.649	0.734	-0.838	-1.258
0.075	7.221	8.028	0.713	0.586	-1.153	-0.541
0.100	6.880	8.297	0.765	0.542	-1.412	-0.337
0.150	6.411	8.614	0.836	0.487	-1.768	-0.096
0.200	6.286	8.798	0.855	0.454	-1.862	0.043
0.300	6.422	8.990	0.834	0.417	-1.759	0.188
0.500	7.502	10.280	0.670	0.143	-0.940	1.167
0.700	8.178	9.049	0.562	0.405	-0.428	0.234
0.800	8.356	8.937	0.532	0.427	-0.292	0.148
0.850	8.415	8.866	0.522	0.441	-0.248	0.094
0.900	8.460	8.749	0.514	0.463	-0.214	0.006
0.950	8.469	8.587	0.513	0.492	-0.206	-0.117

(C) SECTION D

0.000	8.076	8.076	0.579	0.579	-0.504	-0.504
0.025	7.571	9.621	0.659	0.273	-0.888	0.667
0.050	7.512	9.253	0.668	0.362	-0.932	0.388
0.075	7.497	9.276	0.670	0.357	-0.944	0.406
0.100	7.545	9.306	0.663	0.351	-0.908	0.428
0.150	7.619	9.382	0.651	0.333	-0.851	0.486
0.200	7.720	9.440	0.636	0.320	-0.775	0.530
0.300	7.906	9.537	0.606	0.295	-0.633	0.604
0.500	8.419	9.549	0.521	0.292	-0.244	0.613
0.700	8.778	9.459	0.457	0.315	0.028	0.544
0.800	8.868	9.374	0.441	0.335	0.096	0.480
0.850	8.895	9.301	0.435	0.352	0.117	0.425
0.900	8.911	9.202	0.432	0.373	0.129	0.350
0.950	8.906	9.059	0.433	0.403	0.125	0.241

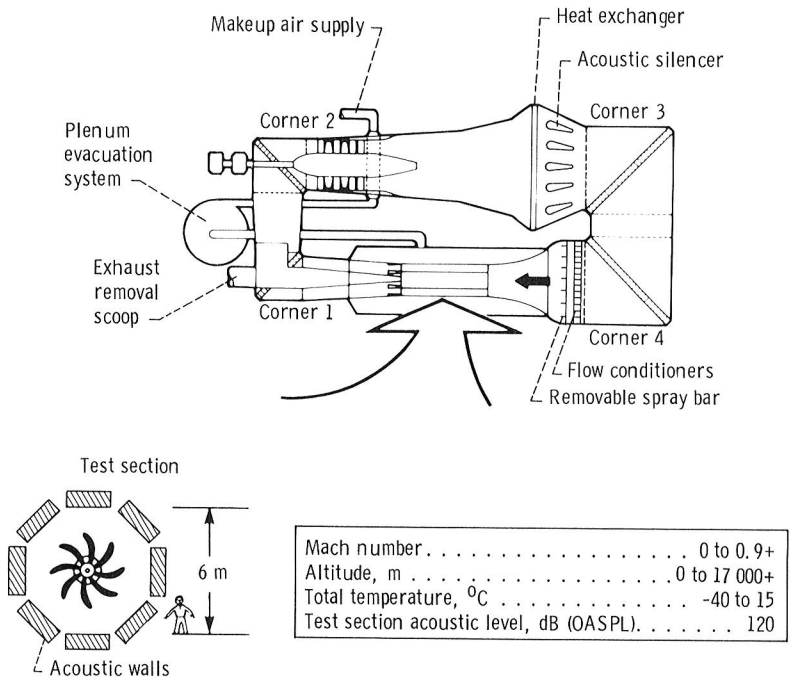


Figure 1.—Capabilities of modified and rehabilitated AWT.

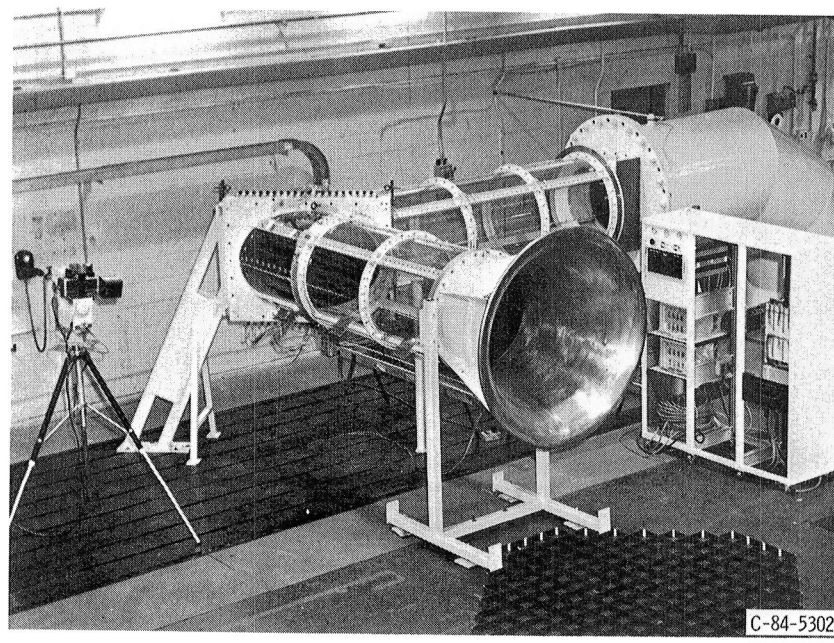


Figure 2.—Corner 1 test configuration.

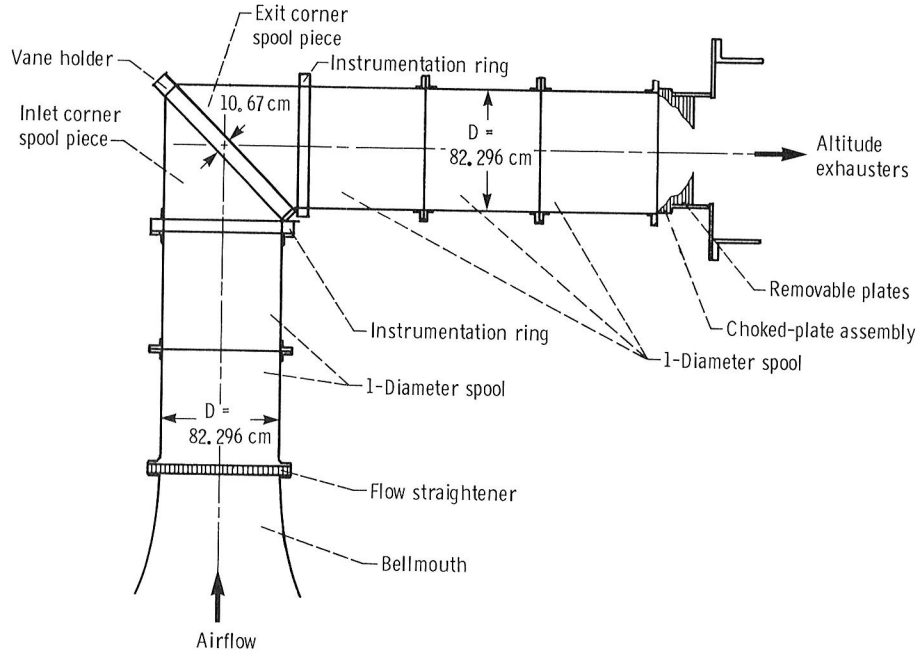


Figure 3.—Schematic of corner 1 test apparatus without scoop.

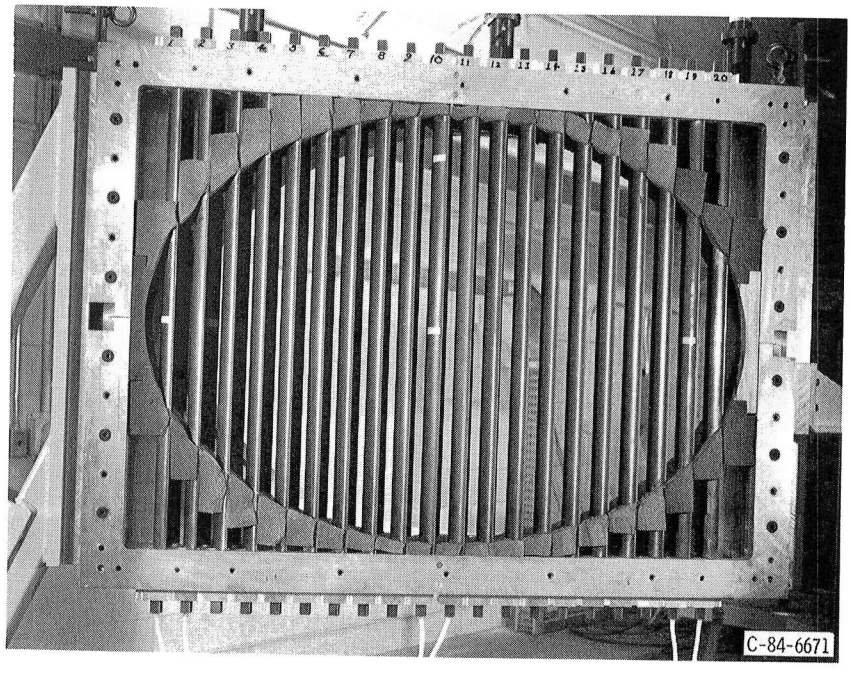


Figure 4.—Corner 1 vane holder.

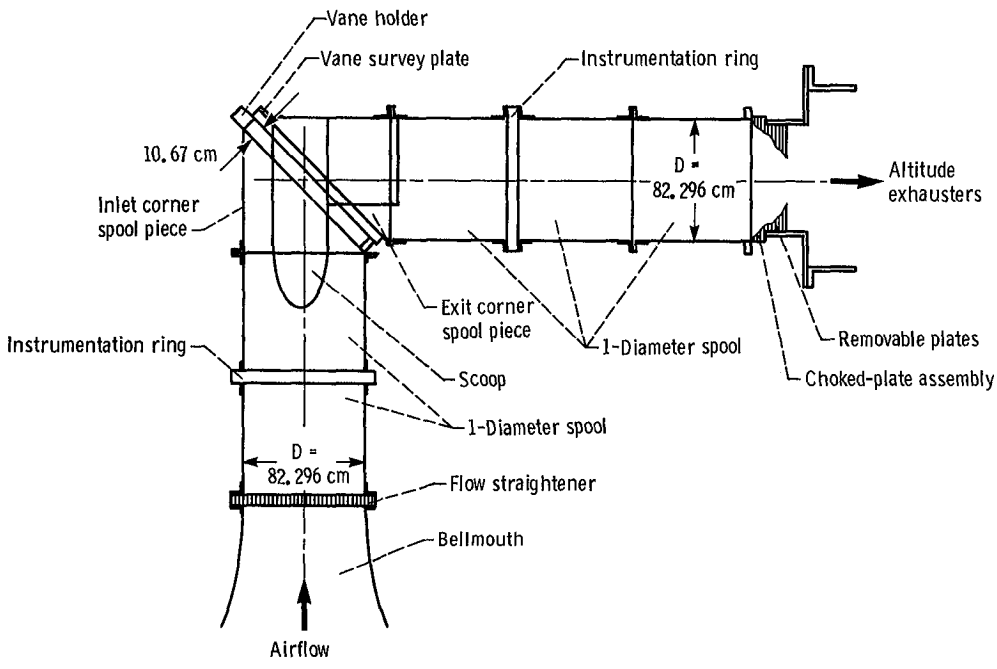
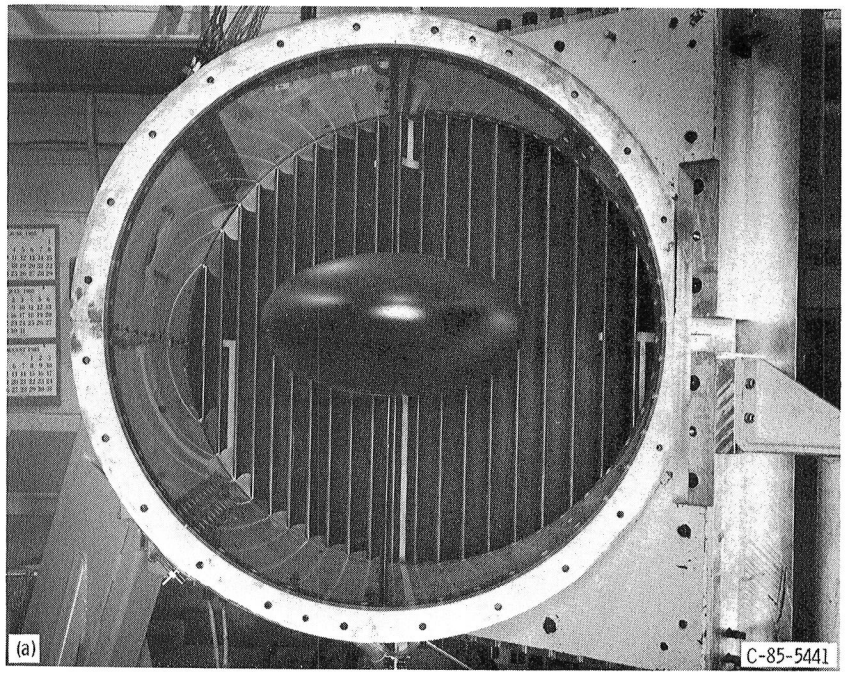
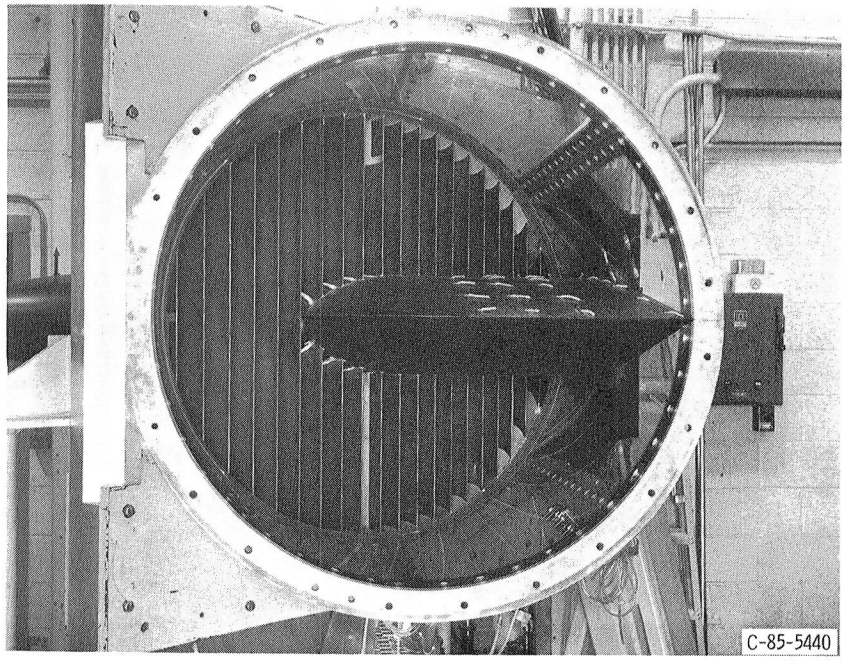


Figure 5.—Schematic of corner 1 test apparatus with scoop.





(a) Inlet.
(b) Exit.

Figure 6.—Corner 1 with scoop.

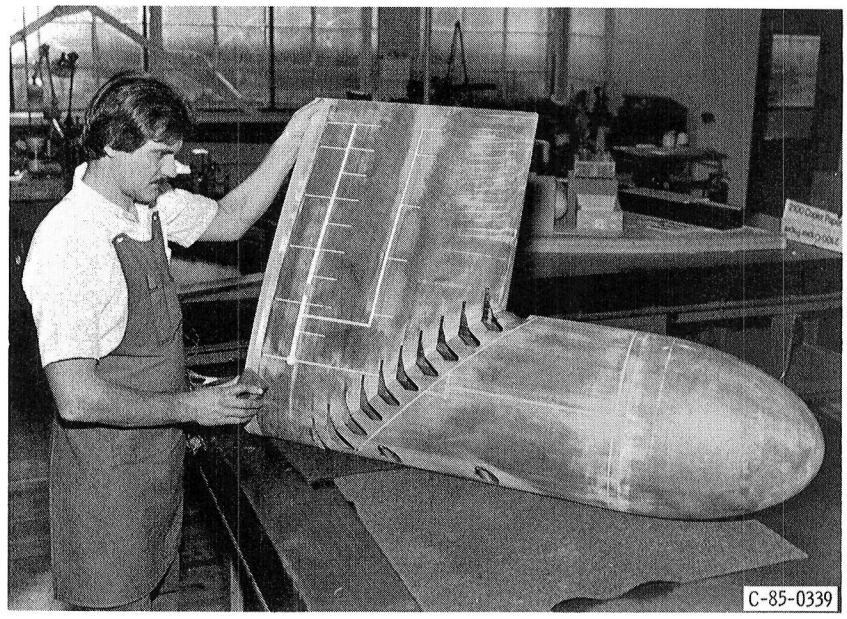


Figure 7.—Scoop showing cutouts for vanes.

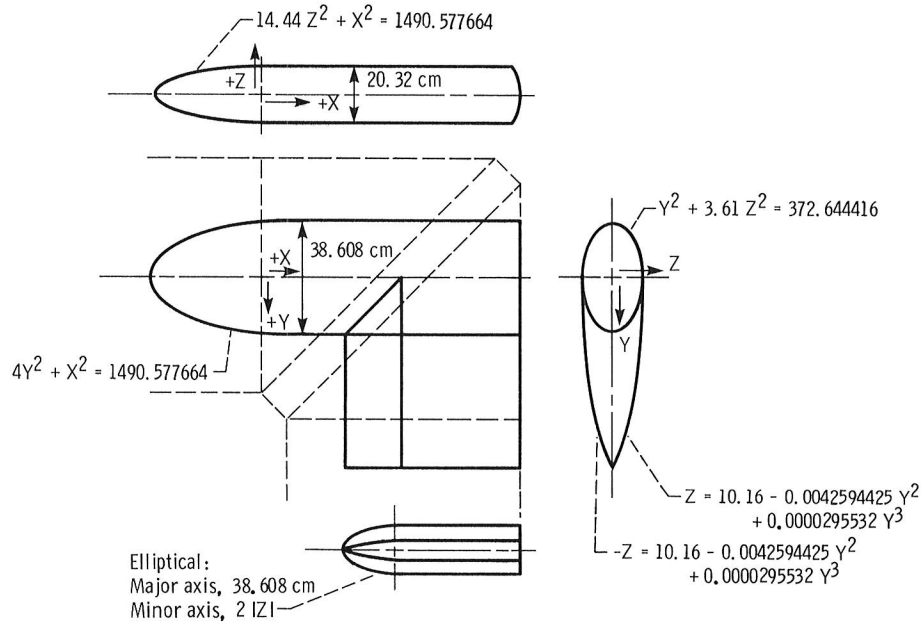


Figure 8.—Geometry of scoop.

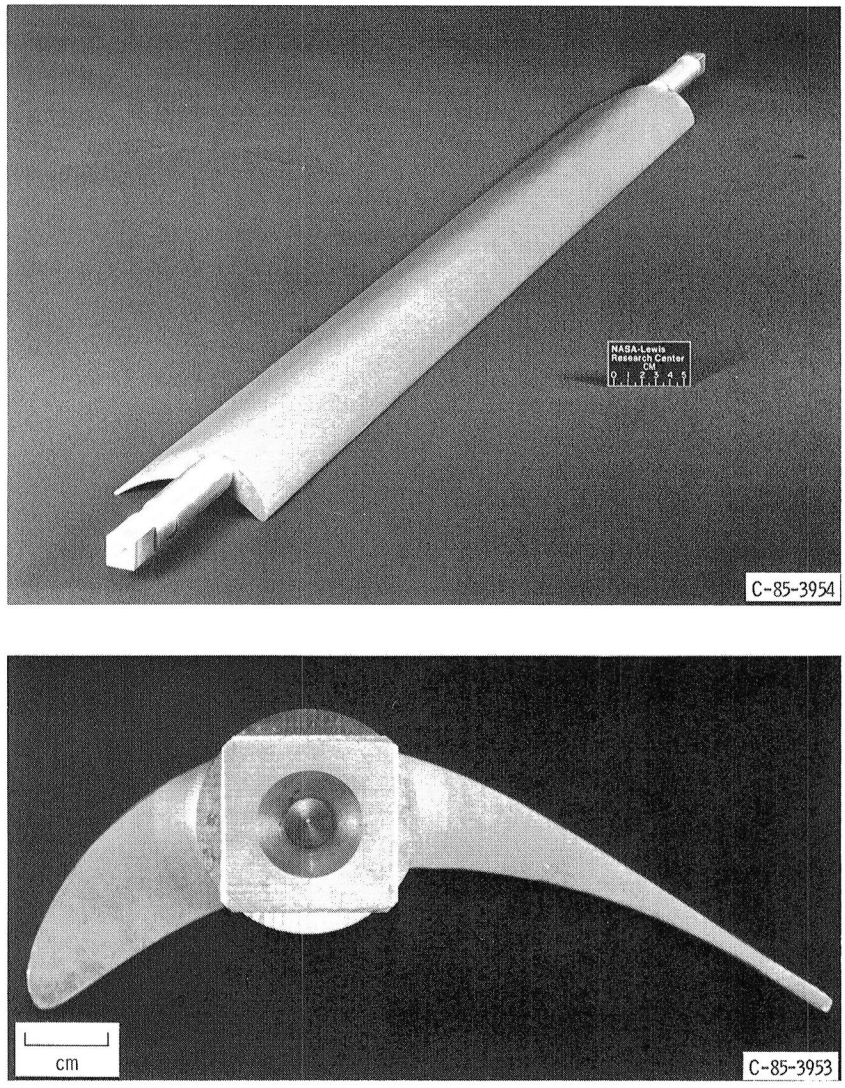


Figure 9.—Vane A.

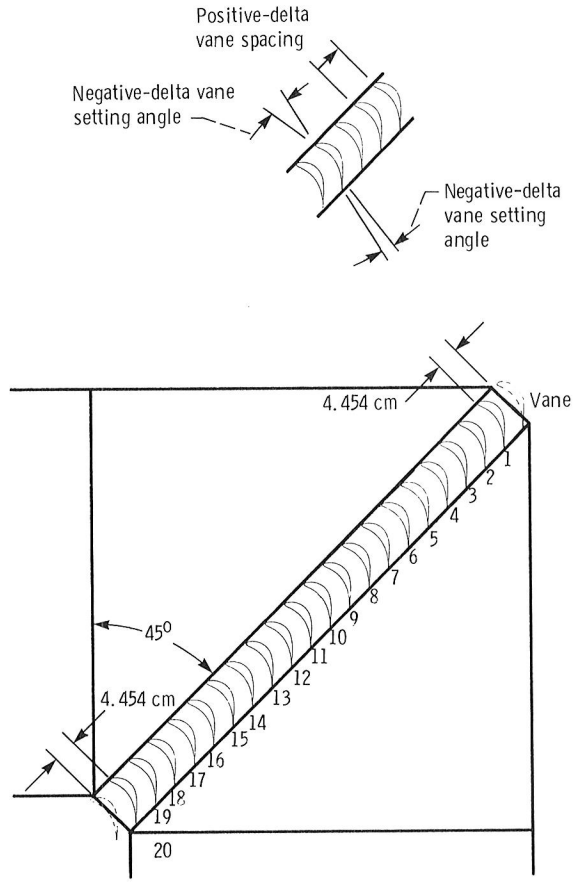
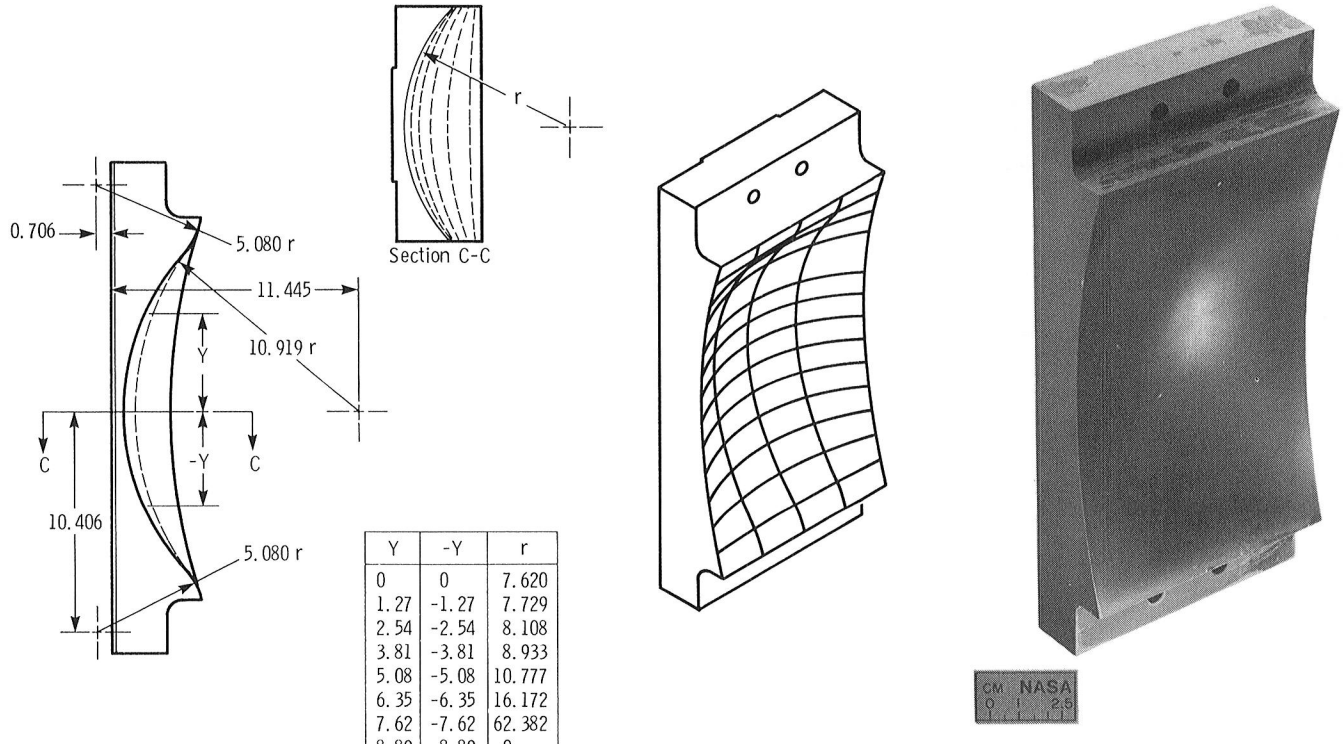


Figure 10.—Schematic showing vane A setup (20 vanes) in corner 1 (along major axis).



Y	-Y	r
0	0	7.620
1.27	-1.27	7.729
2.54	-2.54	8.108
3.81	-3.81	8.933
5.08	-5.08	10.777
6.35	-6.35	16.172
7.62	-7.62	62.382
8.89	-8.89	0

Figure 11.—Outside corner modification for vane A (A11). (Dimensions are in centimeters.)

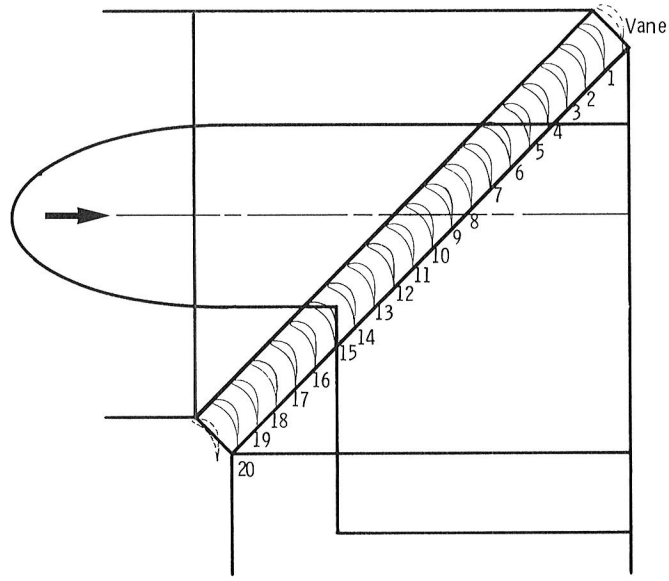
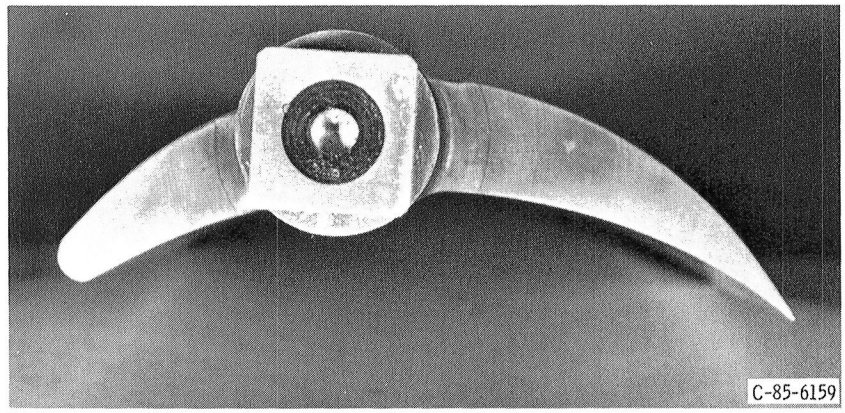


Figure 12.—Schematic showing vane A10 setup in corner 1 with scoop (along major axis).



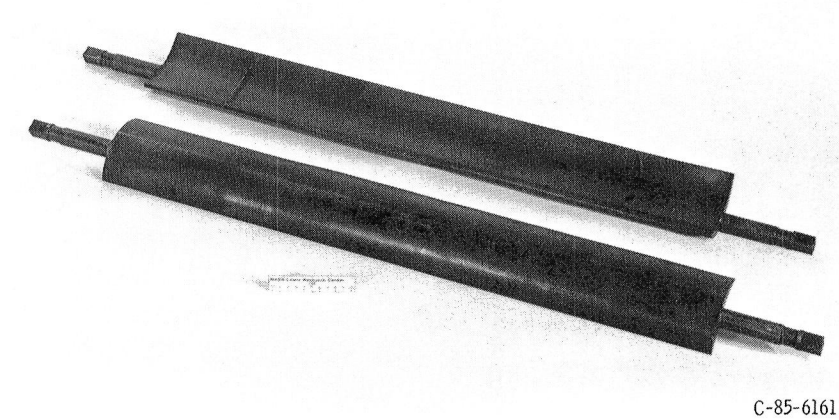


Figure 13.—Vane B.

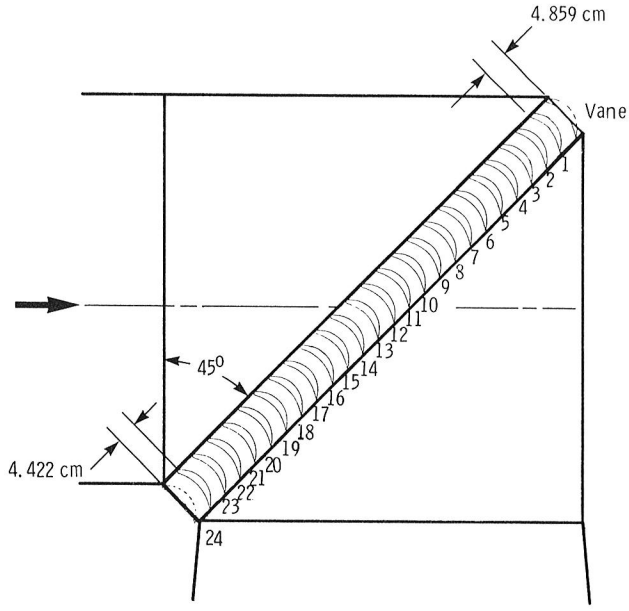


Figure 14.—Schematic showing vane B setup (24 vanes) in corner 1 (along major axis).

Element	Distance from outer wall, cm	Distance from outer wall to centerline, percent of span	Type
1	2.057	5.0	Pressure
2	3.086	7.5	Temperature
3	4.115	10.0	Pressure
4	6.172	15.0	↓
5	8.230	20.0	
6	12.344	30.0	
7	16.459	40.0	Temperature
8	20.574	50.0	Pressure
9	28.804	70.0	Pressure
10	32.918	80.0	Temperature
11	37.033	90.0	Pressure
12	45.263	90.0	Pressure
13	49.378	80.0	Temperature
14	53.492	70.0	Pressure
15	61.722	50.0	Pressure
16	65.837	40.0	Temperature
17	69.952	30.0	Pressure
18	74.066	20.0	↓
19	76.124	15.0	
20	78.181	10.0	
21	79.210	7.5	Temperature
22	80.239	5.0	Pressure

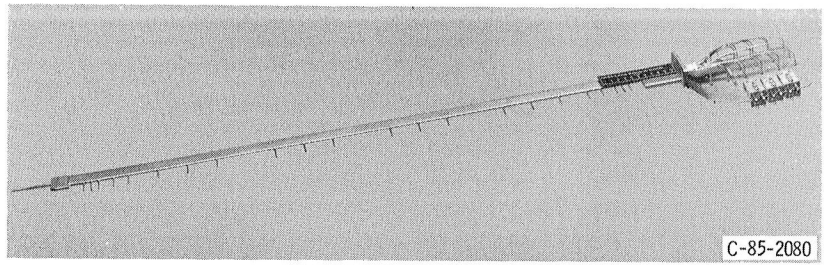


Figure 15.—Total pressure—total temperature diametrical rake.

Element	Distance from outer wall, cm	Distance from outer wall to centerline, percent of span
1	0.411	1.0
2	.823	2.0
3	1.234	3.0
4	1.646	4.0
5	2.057	5.0
6	3.086	7.5
7	4.115	10.0
8	5.144	12.5

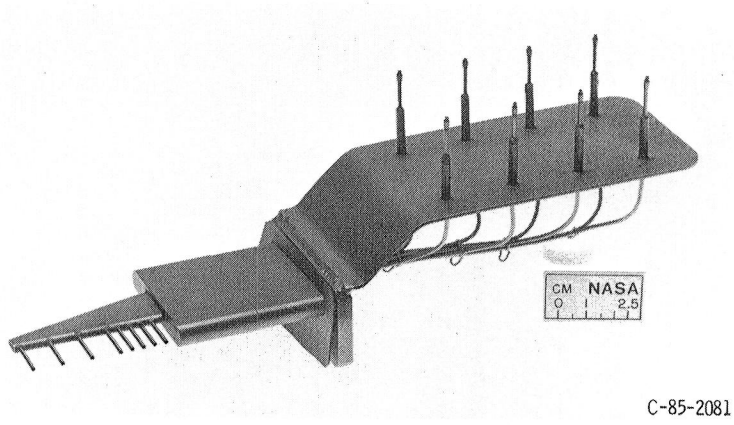
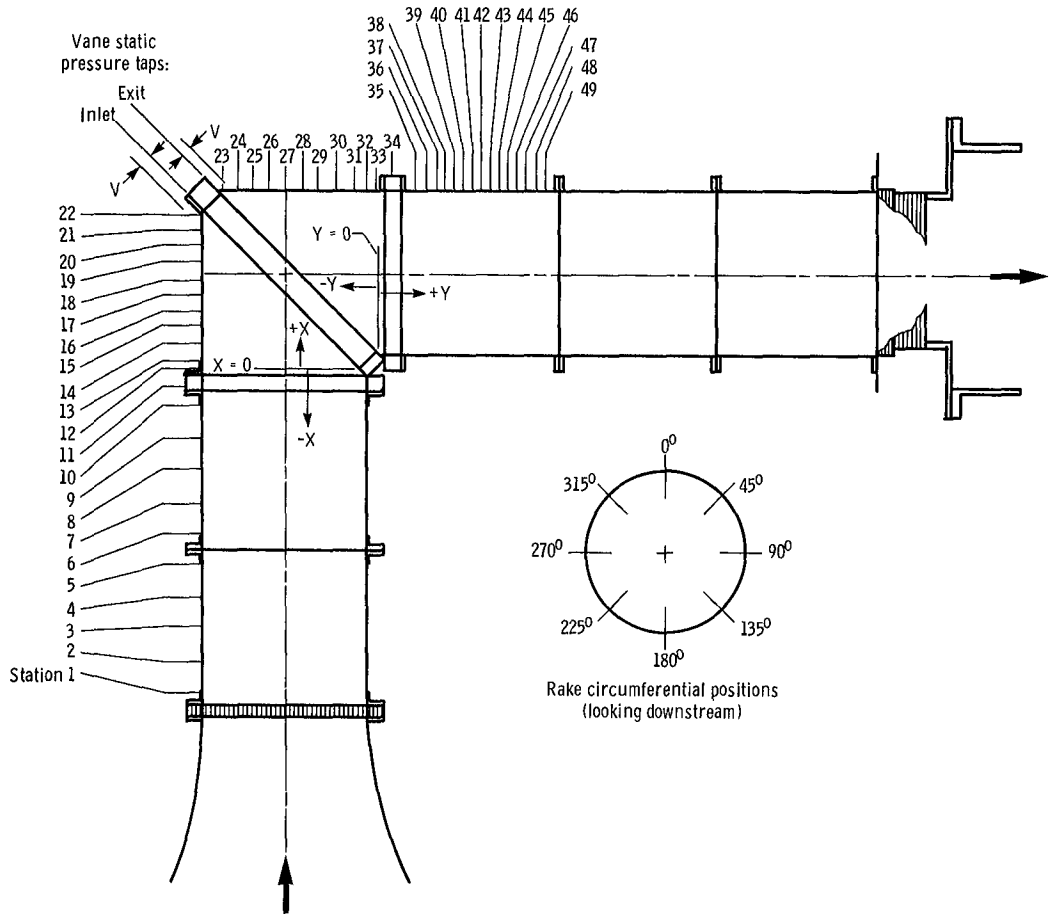


Figure 16.—Boundary layer total pressure rake.



Wall static pressure tap locations

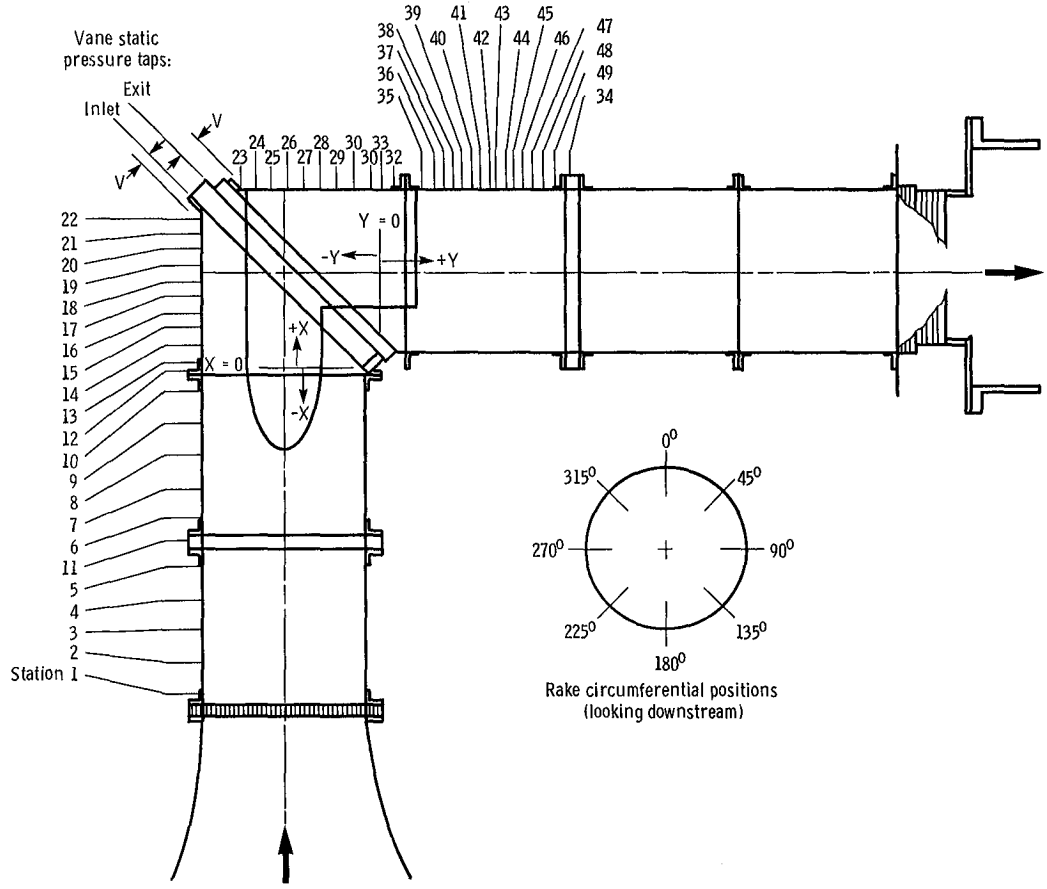
Station	X	θ	Station	Y	θ
1	-167.92	90	[a]23	-78.36	----------
2	-151.46	↓	24	-70.13	270
3	-135.00	↓	25	-61.90	↓
4	-118.54	↓	26	-53.67	↓
5	-102.08	↓	27	-45.44	↓
6	-85.62	↓	28	-37.21	↓
7	-69.16	↓	29	-28.98	0, 180, 270
8	-52.71	↓	30	-20.75	↓
9	-36.25	↓	31	-12.52	↓
10	-19.79	↓	32	-4.29	↓
11	-7.75	11, 101, 191, 281	[a]33	0	----------
[a]12	0	----------	34	7.75	11, 101, 191, 281
13	4.29	0, 180, 270	35	19.79	0, 90, 180, 270
14	12.52	↓	36	23.90	90
15	20.75	↓	37	28.02	90
16	28.98	↓	38	32.13	90
17	37.21	270	39	36.25	0, 90, 180, 270
18	45.44	↓	40	40.36	90
19	53.67	↓	41	44.48	90
20	61.90	↓	42	48.59	90
21	70.13	↓	43	52.71	0, 90, 180, 270
[a]22	78.36	----------	44	56.82	90
			45	60.93	90
			46	65.05	90
			47	69.16	0, 90, 180, 270
			48	77.39	90
			49	85.62	0, 90, 180, 270

[a]No tap installed.

Vane static plane:
Inlet V = 5.34
Outlet V = 5.34

Rake plane:
Inlet X = -10.08
Outlet Y = 5.41

Figure 17.—Instrumentation locations for corner 1 without scoop. (Linear dimensions are in centimeters.)



Wall static pressure tap locations

Station	X	θ
1	-167.92	90
2	-151.46	
3	-135.00	
4	-118.54	
5	-102.08	
6	-78.00	
7	-61.54	
8	-45.09	
9	-28.63	
10	-12.17	
11	-90.046	11, 101, 191, 281
[a]12	0	----------
13	4.29	0, 180, 270
14	12.52	
15	20.75	
16	28.98	
17	37.21	270
18	45.44	
19	53.67	
20	61.90	
21	70.13	
[a]22	78.36	----------

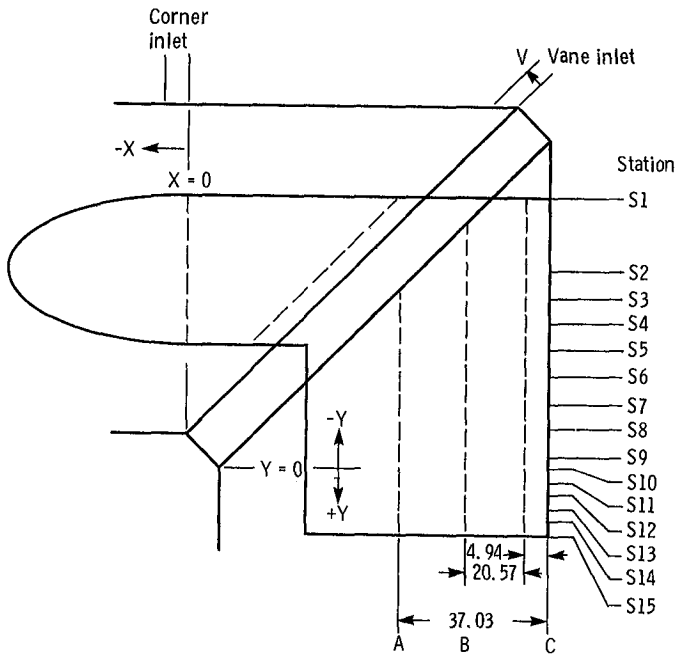
Station	Y	θ
[a]23	-67.58	----------
24	-59.35	[b]270
25	-51.12	
26	-42.89	
27	-34.66	
28	-26.43	
29	-18.20	0, 90, 180, [b]270
30	-9.97	
31	-1.74	
32	6.49	
33	0	----------
34	100.82	11, 101, 191, 281
35	22.95	0, 90, 180, 270
36	27.06	90
37	31.18	90
38	35.29	90
39	39.41	0, 90, 180, 270
40	43.52	90
41	47.64	90
42	51.75	90
43	55.87	0, 90, 180, 270
44	59.98	90
45	64.09	90
46	68.21	90
47	72.32	0, 90, 180, 270
48	80.55	90
49	88.78	0, 90, 180, 270

[a]No tap installed.
[b]Tap covered by scoop.

Vane static plane:
Inlet V = 5.34
Outlet V = 12.96

Rake plane:
Inlet X = -92.376
Outlet Y = 98.482

Figure 18.—Instrumentation locations for corner 1 with scoop. (Linear dimensions are in centimeters.)



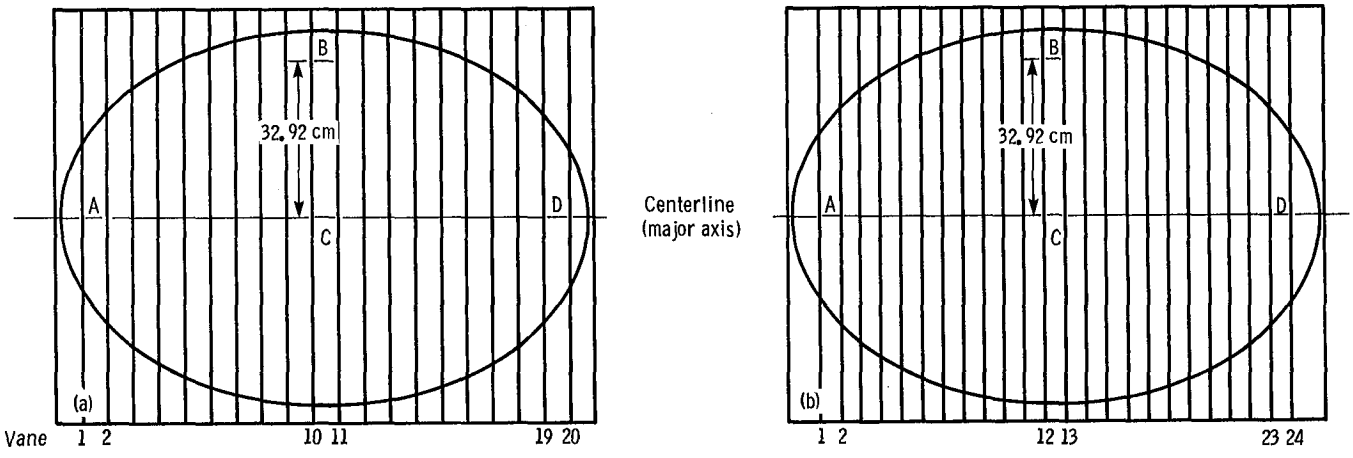
Scoop static pressure tap locations

Station	Y	Row (top surface)
S1	-68.00	C
S2	-48.69	B[a], C
S3	-42.09	B
S4	-35.48	A, B[a], C
S5	-28.88	B
S6	-22.28	A, B[a], C
S7	-15.67	B
S8	-9.07	A, B[a], C
S9	-2.46	B
S10	.84	B
S11	4.14	A, B[a], C
S12	7.44	B
S13	10.74	A, B, C
S14	13.03	B
S15	17.27	A, B, C

[a]Also on bottom surface.

Inlet static plane:
Corner X = -3.94
Vane V = 5.34
} $\theta = 0^0, 90^0, 180^0, 270^0$

Figure 19.—Static pressure tap locations on scoop. (Linear dimensions are in centimeters.)



(a) Vane A.
(b) Vane B.

Figure 20.—Vane surface static pressure tap locations (looking downstream).

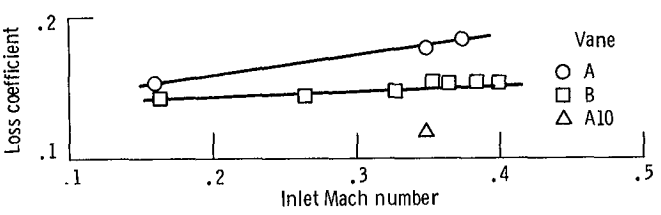


Figure 21.—Corner 1 loss coefficient as function of inlet Mach number without scoop.

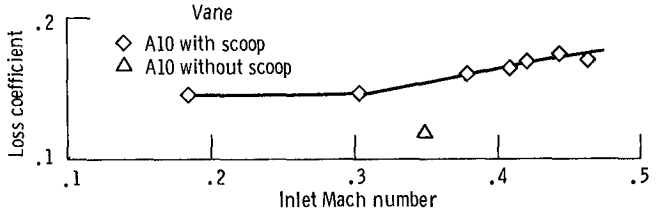
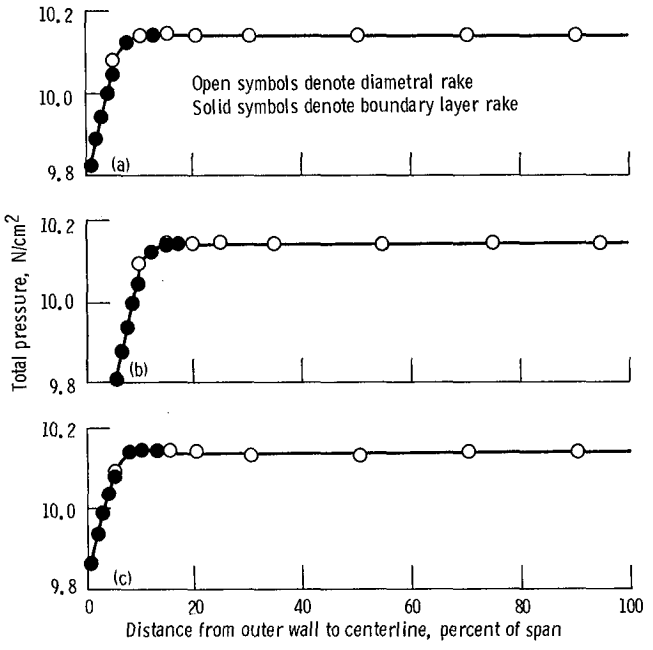
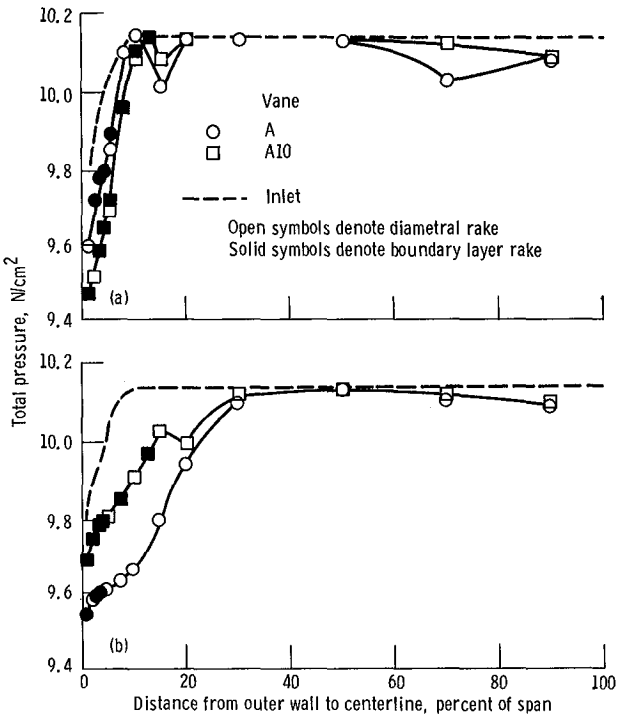


Figure 22.—Corner 1 loss coefficient as function of inlet Mach number for vane A10 with scoop.



(a) Vane A.
(b) Vane A10.
(c) Vane B.

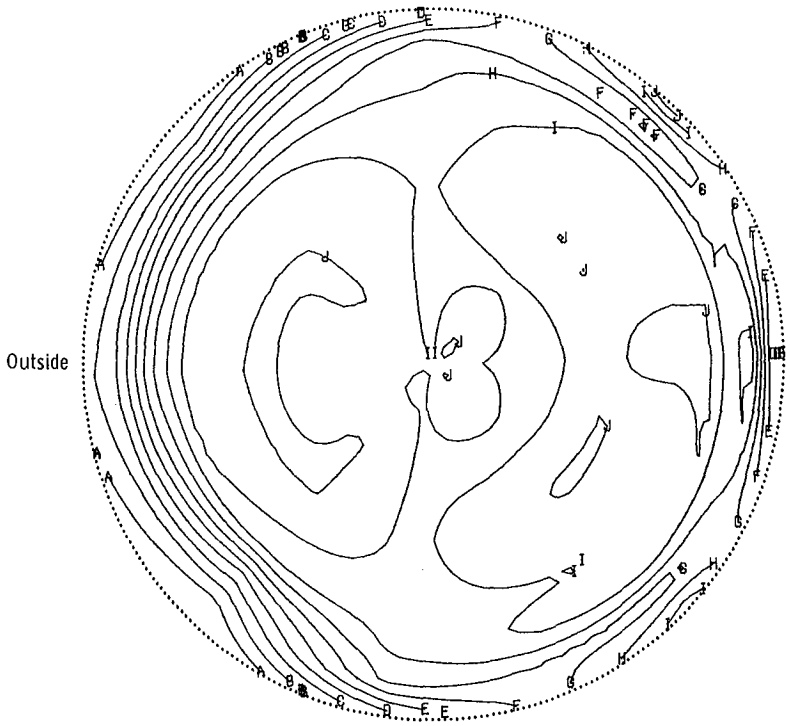
Figure 23.—Total pressure profiles at inlet of corner 1 without scoop. Circumferential location, 0°; nominal inlet Mach number, 0.35.



(a) Circumferential location, 90° (inside corner.)
(b) Circumferential location, 270° (outside corner).

Figure 24.—Exit total pressure profiles for vanes A and A10 in corner 1 without scoop. Nominal inlet Mach number, 0.35.

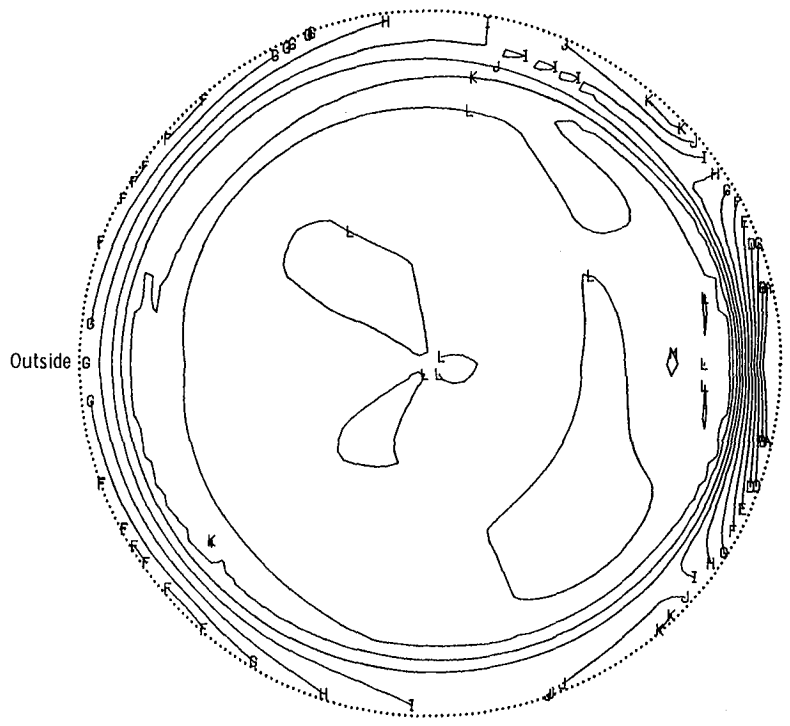
Contour	Exit total pressure, N/cm^2
A	9.515
B	9.584
C	9.653
D	9.722
E	9.791
F	9.860
G	9.929
H	9.997
I	10.066
J	10.135



(a)

Looking downstream

A	9.308
B	9.377
C	9.446
D	9.515
E	9.584
F	9.653
G	9.722
H	9.791
I	9.860
J	9.929
K	9.997
L	10.066
M	10.135



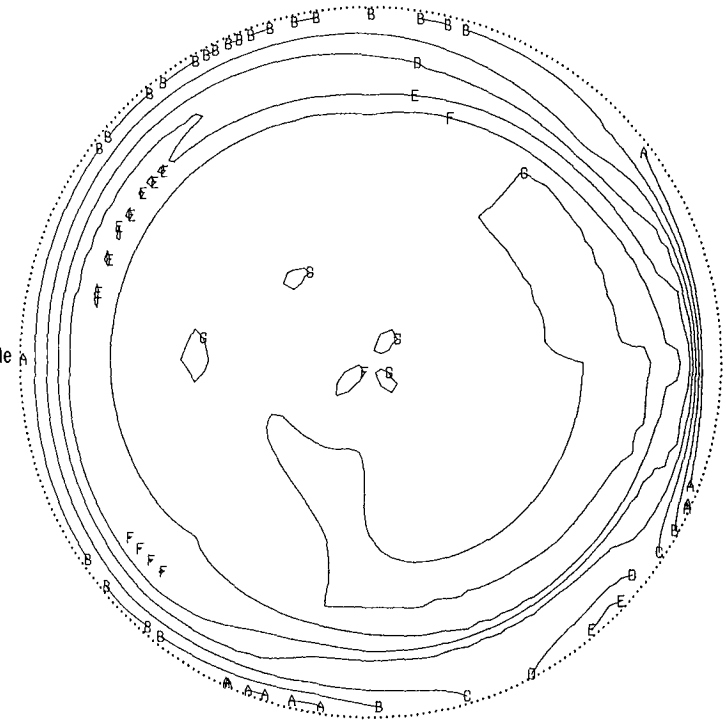
(b)

Looking downstream

(a) Vane A.
(b) Vane B.

Figure 25.—Exit total pressure contours without scoop. Nominal airflow, 72.5 kg/sec; nominal inlet Mach number, 0.35.

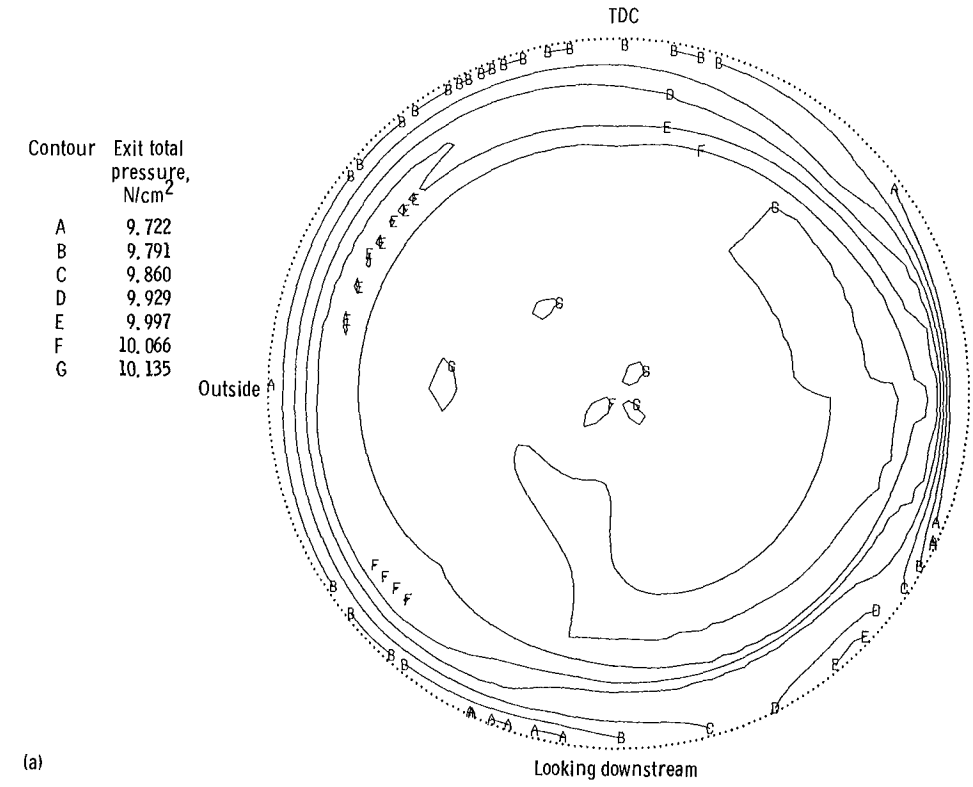
Contour	Exit total pressure, N/cm^2
A	9.722
B	9.791
C	9.860
D	9.929
E	9.997
F	10.066
G	10.135

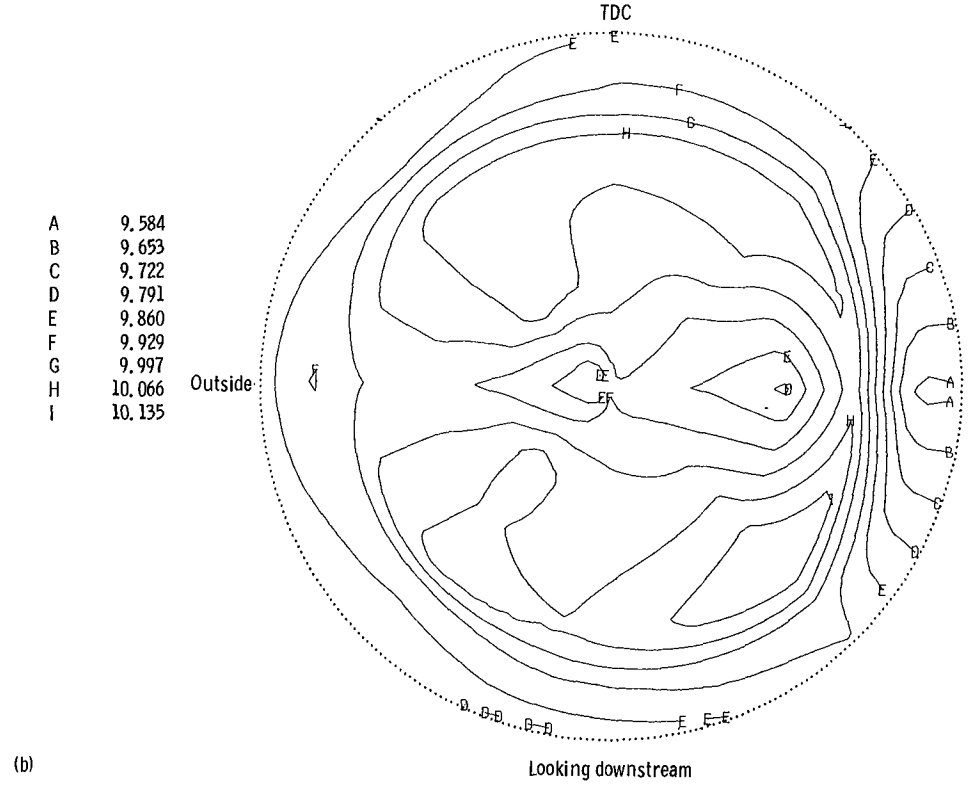


(c)

(c) Vane A10.

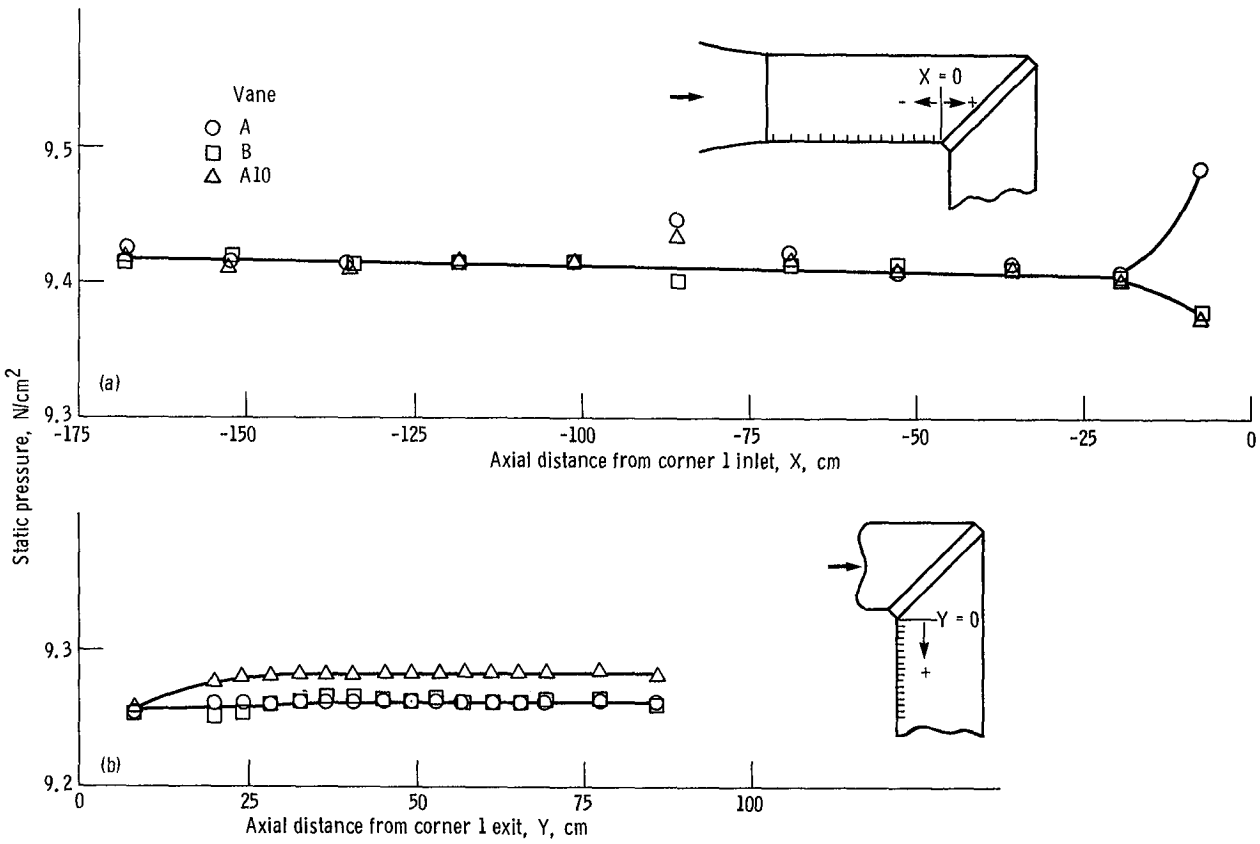
Figure 25.—Concluded.





(a) Without scoop.
(b) With scoop.

Figure 26.—Effect of scoop on exit total pressure contours for vane A10. Nominal airflow, 72.5 kg/sec.



(a) Upstream.
(b) Downstream.

Figure 27.—Axial wall static pressure distributions upstream and downstream of corner 1 without scoop. Circumferential location, 90°; nominal airflow, 72.5 kg/sec; nominal inlet Mach number, 0.35.

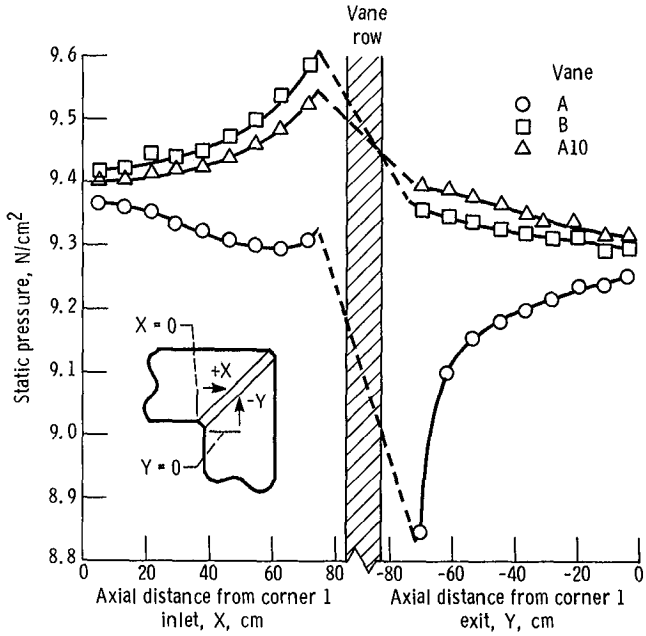


Figure 28.—Axial wall static pressure distribution in corner 1 without scoop. Circumferential location, 270°; nominal airflow, 72.5 kg/sec; nominal inlet Mach number, 0.35.

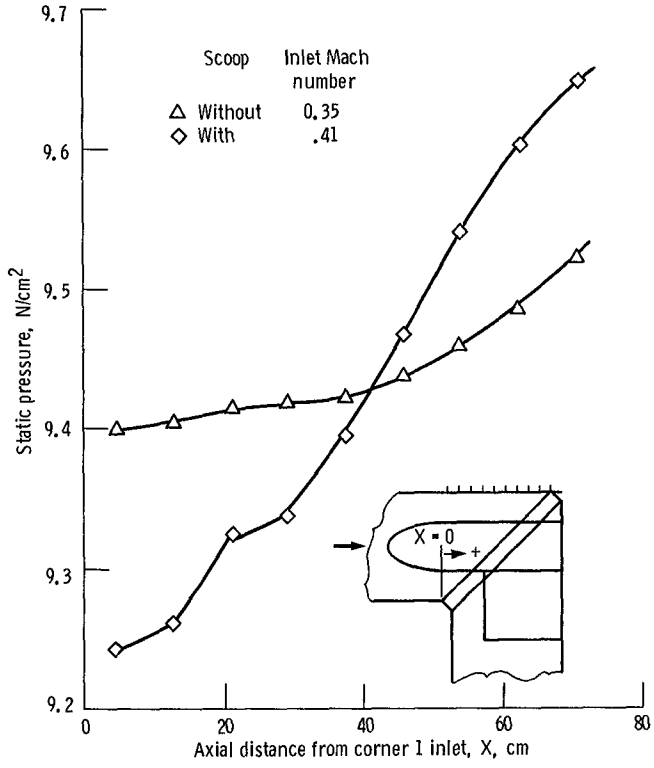
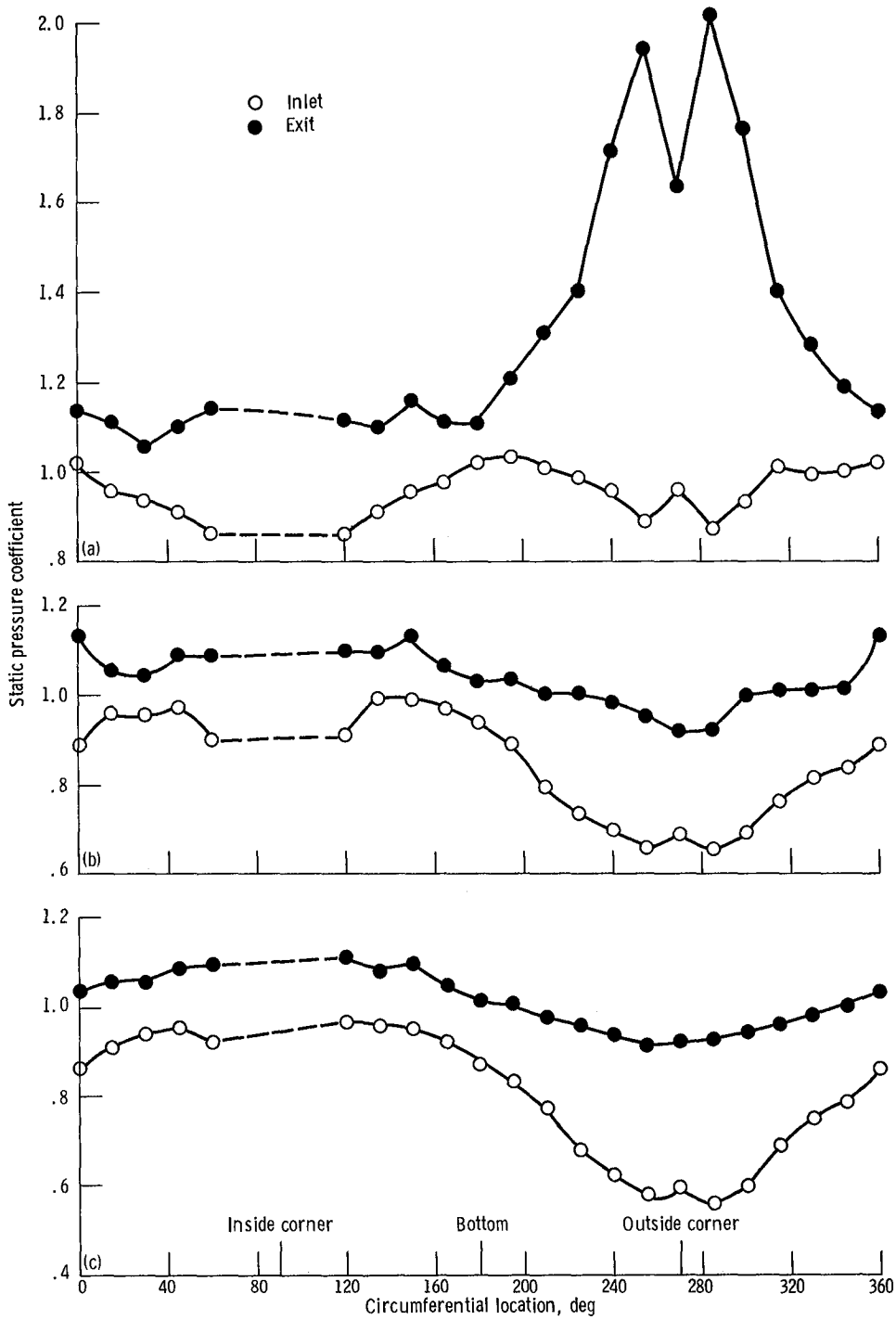
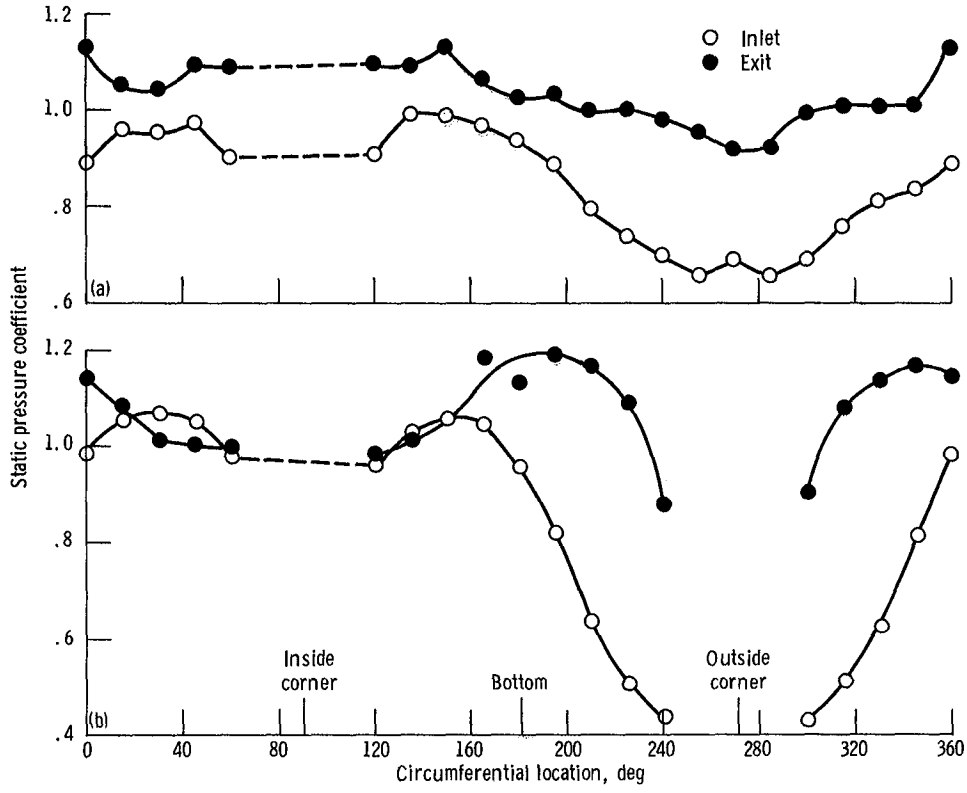


Figure 29.—Effect of scoop on axial wall static pressure distribution in corner 1 with vane A10. Circumferential location, 270°; nominal airflow, 72.5 kg/sec.



(a) Vane A.
(b) Vane A10.
(c) Vane B.

Figure 30.—Circumferential distribution of static pressure coefficient upstream and downstream of vane row. Corner 1 without scoop; nominal inlet Mach number, 0.35; nominal airflow, 72.5 kg/sec.



(a) Without scoop.
(b) With scoop.

Figure 31.—Effect of scoop on circumferential distribution of static pressure coefficient upstream and downstream of vane A10 in corner 1. Nominal airflow, 72.5 kg/sec.

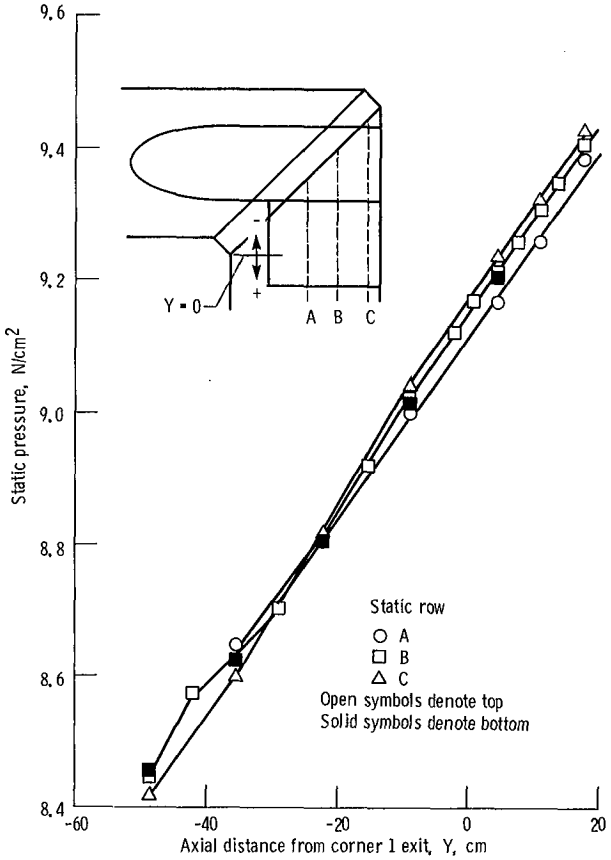


Figure 32.—Axial static pressure distribution on downstream scoop airfoil section for vane A10. Nominal airflow, 72.2 kg/sec.

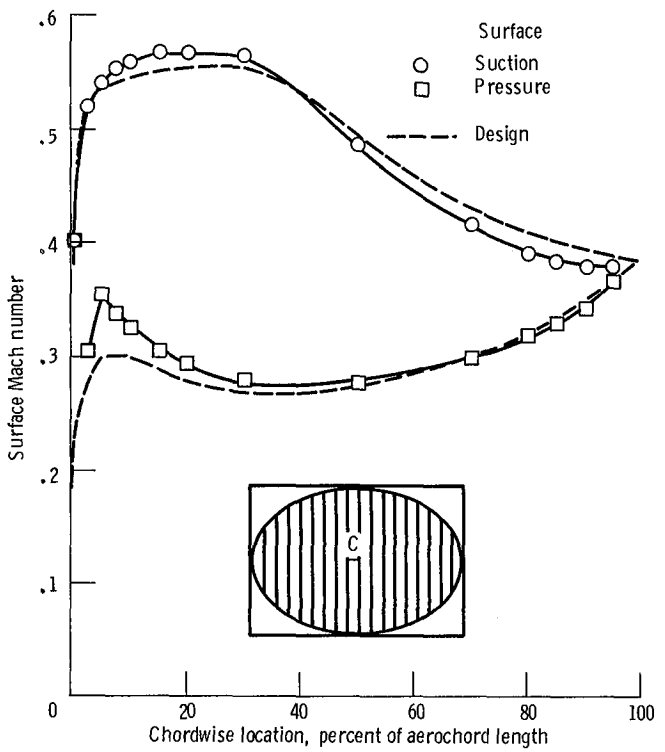


Figure 33.—Measured and design Mach number distributions for vane A in corner 1 without scoop. Section C. Nominal inlet Mach number, 0.35.

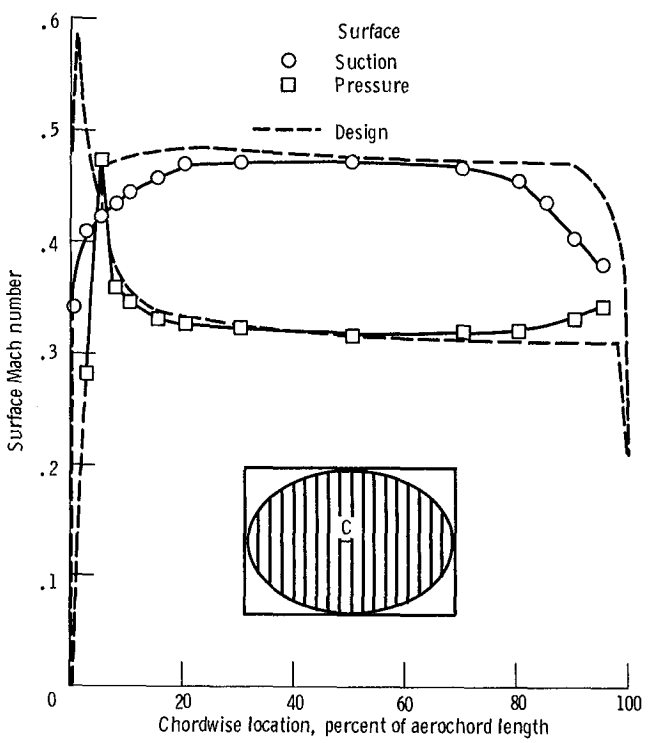
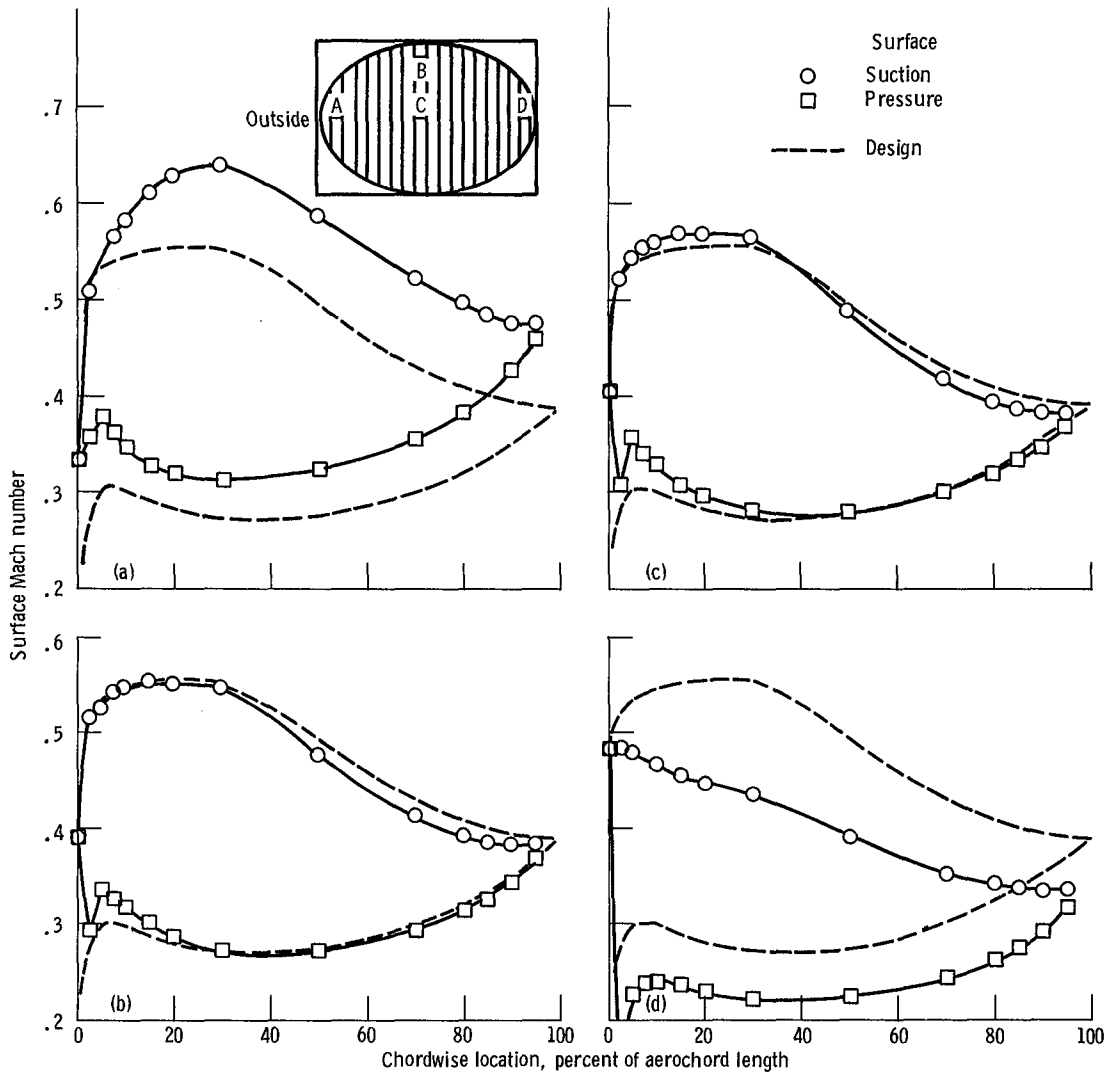
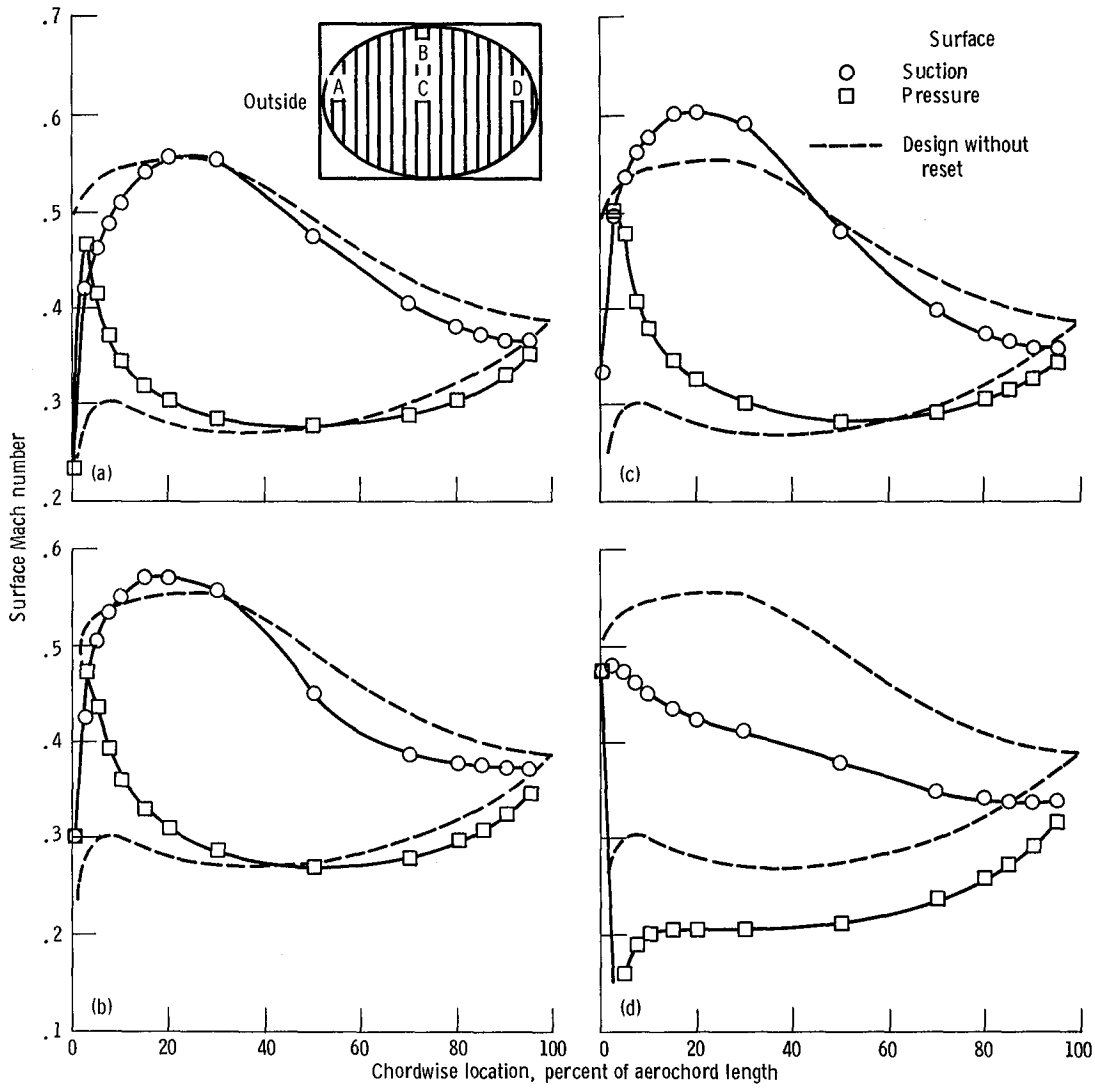


Figure 34.—Measured and design Mach number distributions for vane B in corner 1 without scoop. Section C. Nominal inlet Mach number, 0.35.



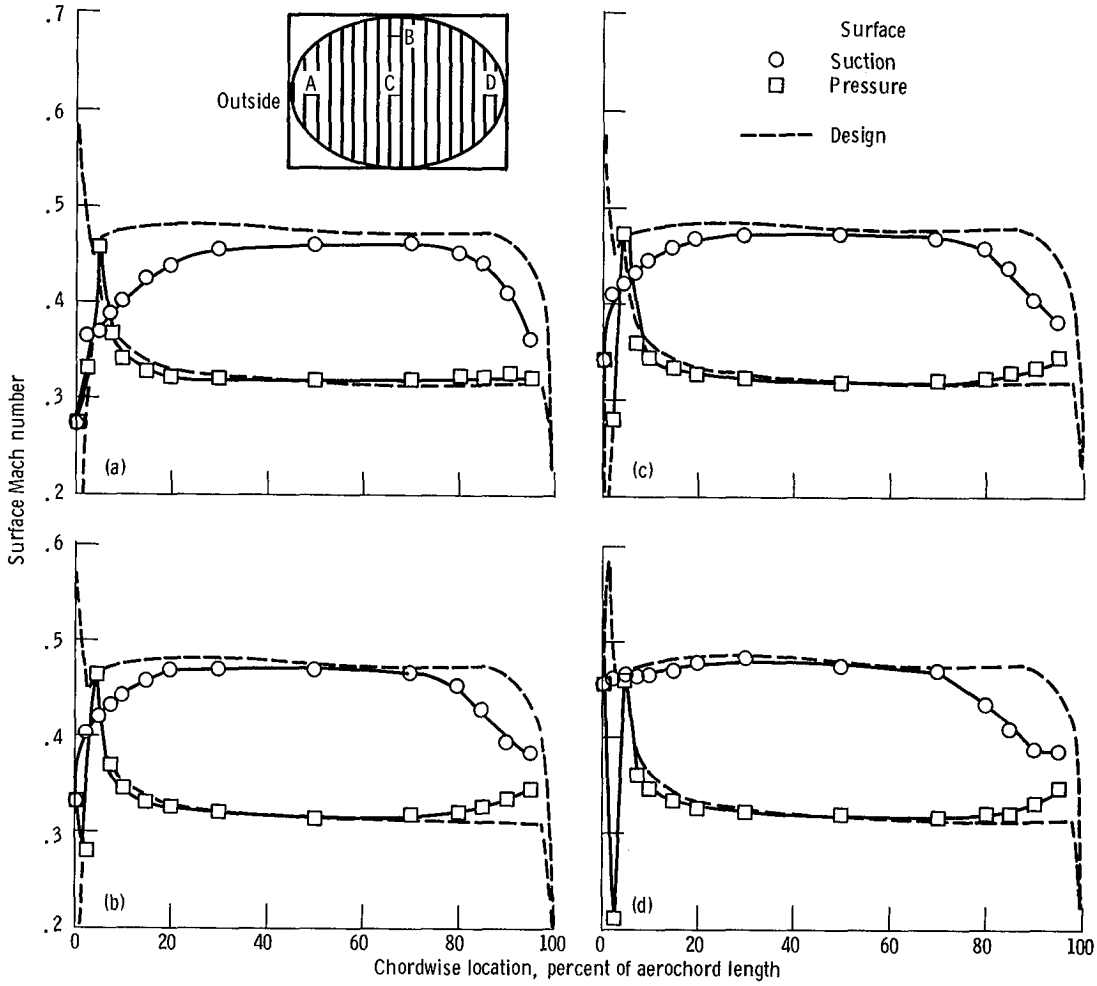
(a) Section A.
(b) Section B.
(c) Section C.
(d) Section D.

Figure 35.—Surface Mach number distributions for vane A in corner 1 without scoop. Nominal inlet Mach number, 0.35.



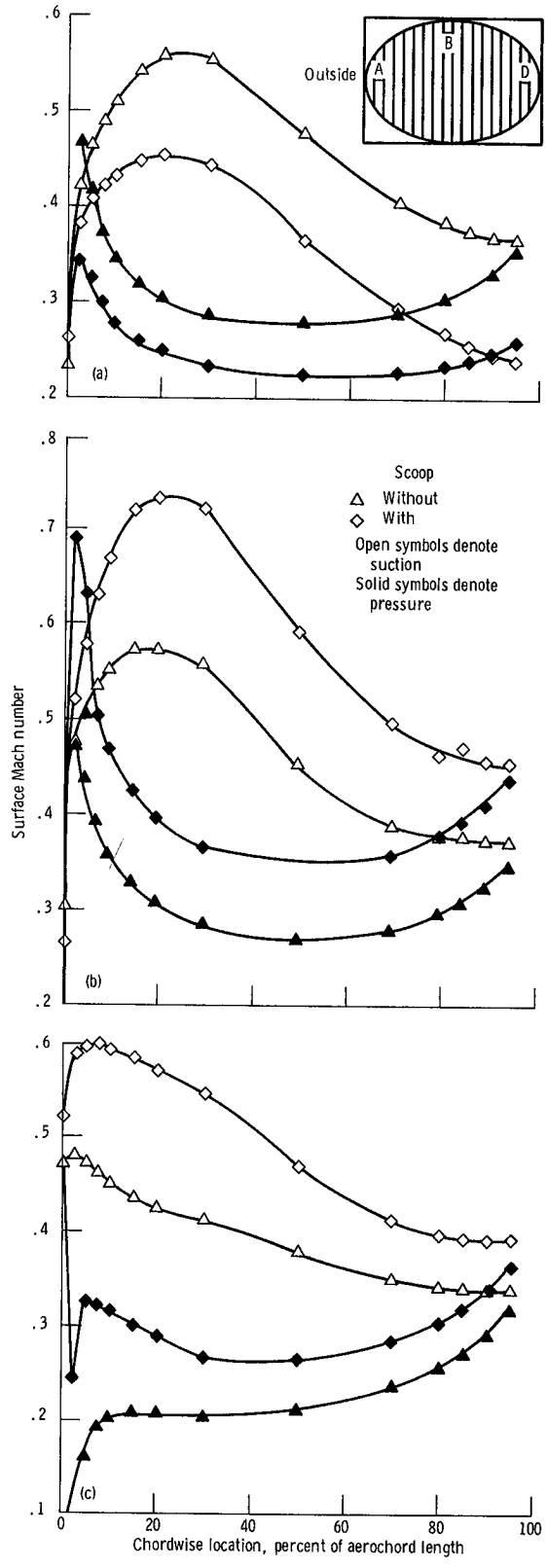
(a) Section A.
(b) Section B.
(c) Section C.
(d) Section D.

Figure 36.—Surface Mach number distributions for vane A10 in corner 1 without scoop. Nominal inlet Mach number, 0.35.



(a) Section A.
(b) Section B.
(c) Section C.
(d) Section D.

Figure 37.—Surface Mach number distributions for vane B in corner 1 without scoop. Nominal inlet Mach number, 0.35.



(a) Section A.
(b) Section B.
(c) Section D.

Figure 38.—Effect of scoop on vane surface Mach number distributions for vane A10 in corner 1. Nominal airflow, 72.5 kg/sec.

1. Report No.	2. Government Accession No.	3. Recipient's Catalog No.
NASA TP-2570		

4. Title and Subtitle	5. Report Date
Experimental Evaluation of Two Turning Vane Designs for High-Speed Corner of 0.1-Scale Model of NASA Lewis Research Center's Proposed Altitude Wind Tunnel	April 1986
	6. Performing Organization Code: 505-40-74

7. Author(s)	8. Performing Organization Report No.
Royce D. Moore, Donald R. Boldman, and Rickey J. Shyne	E-2831
	10. Work Unit No.

9. Performing Organization Name and Address	11. Contract or Grant No.
National Aeronautics and Space Administration Lewis Research Center Cleveland, Ohio 44135	
	13. Type of Report and Period Covered: Technical Paper

12. Sponsoring Agency Name and Address	14. Sponsoring Agency Code
National Aeronautics and Space Administration Washington, D.C. 20546	

15. Supplementary Notes

16. Abstract

Two turning vane designs were experimentally evaluated for corner 1 (downstream of the test section) of a 0.1-scale model of the NASA Lewis Research Center's proposed Altitude Wind Tunnel (AWT). Vane A was a controlled-diffusion airfoil shape; vane B was a circular-arc airfoil shape. The vane designs were tested over corner inlet Mach numbers from 0.16 to 0.465. Several modifications in vane setting angle and vane spacing were also evaluated for vane A. The overall performance obtained from total pressure rakes indicated that vane B had a slightly lower loss coefficient than vane A. At Mach 0.35 (the design Mach number without the engine exhaust removal scoop), the loss coefficients were 0.150 and 0.178 for vanes B and A, respectively. Resetting the vane A angle by -5° (vane A10) to turn the flow toward the outside corner reduced the loss coefficient to 0.119. The best configuration (vane A10) was also tested with a simulated engine exhaust removal scoop. The loss coefficient for that configuration was 0.164 at Mach 0.41 (the approximate design Mach number with the scoop).

17. Key Words (Suggested by Author(s))	18. Distribution Statement
Wind tunnel turning vanes Cascades Corner flows	Unclassified - unlimited STAR Category 09

19. Security Classif. (of this report)	20. Security Classif. (of this page)	21. No. of pages	22. Price*
Unclassified	Unclassified	128	A07

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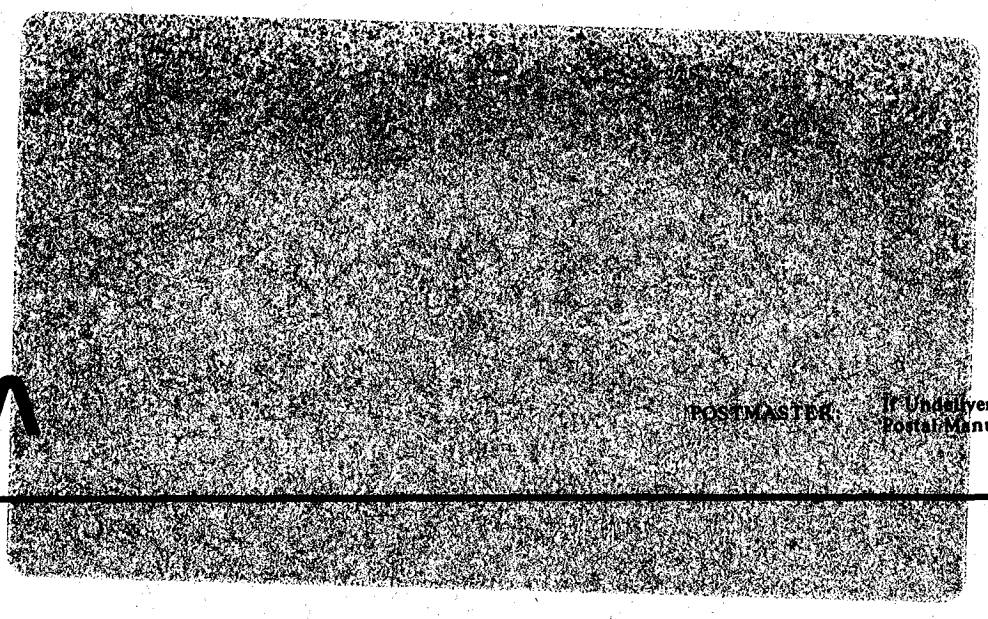
NASA-Langley, 1986



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